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ALLIANCE AND DEFENSE CAPABILITIES IN EUROPE

HEARINGS

BEFORE THE

SUBCOMMITTEE ON
CONVENTIONAL FORCES AND ALLIANCE DEFENSE

OF THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

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ALLIANCE AND DEFENSE CAPABILITIES IN EUROPE

TUESDAY, AUGUST 4, 1987

U.S. SENATE,
SUBCOMMITTEE ON CONVENTIONAL FORCES
AND ALLIANCE DEFENSE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

NET ASSESSMENT OF OUR DEFENSE CAPABILITY

The subcommittee met in executive session, pursuant to notice, at 2:25 p.m. in room SR-222, Russell Senate Office Building, Senator Carl Levin (chairman) presiding.

Present: Senators Levin, Nunn, Dixon, Glenn, Quayle, and Wilson.

Staff present: Romie L. Brownlee, deputy staff director for the minority; Robert E. Bayer, Robert G. Bell, Jonathan L. Etherton, Richard D. Finn. Jr., John J. Jamre, George K. Johnson, Jr., Ronald P. Kelly, David S. Lyles, Michael J. McCord, T. Kirk McConnell, Patricia L. Watson, Daniel J. Wildfong, professional staff members; Colleen M. Getz, research assistant; Richelle M. Turner, staff assistant.

Also present: Gordon Kerr and Greg Weaver, assistants to Senator Levin; Charles C. Smith, assistant to Senator Dixon; Milton D. Beach, assistant to Senator Glenn; Terrence Lynch, assistant to Senator Shelby; James M. Bodner, assistant to Senator Cohen; Henry D. Sokolski, assistant to Senator Quayle; Mark J. Albrecht, assistant to Senator Wilson; and Alan Ptak, assistant to Senator Gramm.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Senator LEVIN. This afternoon the Subcommittee on Conventional Forces and Alliance Defense initiates its series of hearings on the status of our alliance and defense capabilities in Europe and opportunities for improving our conventional defenses.

Senator Nunn organized the Armed Services Committee and established the Subcommittee on Conventional Forces and Alliance Defense. He placed within the jurisdiction of this subcommittee an oversight responsibility over our primary conventional defense commitment.

These hearings are designed to review the problems in the alliance and explore various potential solutions to those problems.

Most of the hearings will be held in September and October. Though the schedule is not yet final, we envision hearings on the following subjects: An unclassified net assessment of our defense capability; status and prospects of conventional arms control in Europe; NATO armaments cooperation; alliance burden sharing; and alternatives and options for conventional defense improvements.

I want to begin these hearings with the perspective of the unified commander responsible for the defense of Europe. Maj. Gen. C. Norman Wood is the Director of Intelligence for the U.S. European Command and is here as General Galvin's chief intelligence officer.

We have asked General Wood to provide a view of the threats to the alliance and review our capabilities to respond and indicate those areas that need attention in the future. In short, what we have asked for is the unified commander's net assessment of the conventional balance in Europe.

Before I welcome you, General Wood, let me apologize to you and to others who have waited here for 20 minutes. The Democratic Caucus went over the usual 2 o'clock adjournment time. I think it is possible that the Republican Caucus has as well.

I know Senator Quayle would want to be here to also welcome you and perhaps make an opening statement, which we will of course welcome at a later time from him if he is able to get here.

But in any event, the reason for the delay is the unusual circumstance that we had Secretary Shultz come over at the last minute to talk to our caucus, and that caucus is still going on.

Senator Dixon's prepared statement will be entered into the record at this time.

[Prepared statement by Senator Dixon follows:]

Prepared Statement by Senator Alan J. Dixon

Mr. Chairman, today's hearing will focus on the threats facing NATO and the Alliance's strategy and capabilities in defending NATO.

Mr. Chairman, I have reviewed General Wood's statement and I am extremely concerned whether or not this administration seriously considers the challenges we and our Allies face in the conventional defense of Europe.

The major weakness facing our forces is readiness and sustainability!

Mr. Chairman, many, including yourself, have joined me in decrying the administration for its lack of action in redressing this problem. The administration has ignored this problem while spending billions of dollars on strategic weapon systems. Now, we are facing a declining defense budget. In what areas do we cut? As General Wood clearly points out in his statement: Readiness and Sustainability. General Wood points out the NATO Command still suffers from inadequate combat support units and shortages of critical spare parts and ammunition.

Mr. Chairman, I look forward to today's hearing and the other hearings you plan to have with the unified commands. I only regret that these hearings are closed, because I believe it's time for the American people to hear the problems that face our conventional forces and those of our Allies.

Thank you, Mr. Chairman.

Senator **Levin**. Let me welcome you, General, and we would be happy to hear from you at this point.

STATEMENT OF MAJ. GEN. C. NORMAN WOOD, DIRECTOR OF INTELLIGENCE, U.S. EUROPEAN COMMAND

General **Wood**. Thank you, Senator Levin.

I would like to point out as we begin that we were asked to bring the briefing that my predecessor General Heinz gave to this committee about 2 years ago. We have updated the briefing and, both because of the short notice and the fact that we have had a recent change of command in the European theater, we may or may not need to alter some of the assessments after General Galvin has developed his own perspectives.

NATO'S CHALLENGE: THE DEFENSE OF EUROPE

My briefing will provide an overview of NATO's mission, an assessment of the Warsaw Pact threat, and the likely warning time we would expect to have should deterrence fail, and a description of what the alliance would be able to do operationally should we be attacked today.

This approach will underscore the concerns of USCINCEUR on the capabilities of the Warsaw Pact and provide some insight into the problems that concern him most as he attempts to fulfill the responsibilities entrusted to him by the national command authorities and by NATO.

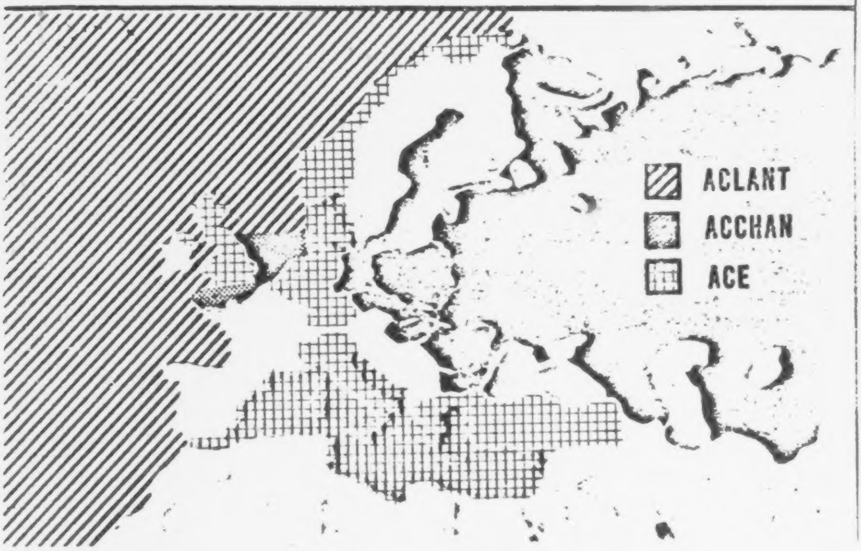
The overall classification of the briefing is "Secret, Not Releasable to Foreign Nationals."

BRIEFING OUTLINE

NATO's mission.
Threat assessment.
Most likely war scenario.
Concerns of USCINCEUR.

Our Commander in Chief, General Galvin, wears two hats, as most of you know. He holds a national position as the Commander in Chief of one of our U.S. unified commands, the European command; and has the NATO position of Commander in Chief of one of the alliance's three major NATO commands, Allied Command, Europe.

NATO COMMANDS



The geographical boundaries of Allied Command Europe are shown here, along with those of the two other major NATO commands: Allied Command Atlantic, commanded by a U.S. admiral, Admiral Baggett; and Allied Command Channel, commanded by a British admiral, Sir Julian Oswald.

I present these relationships for two purposes: first, to illustrate the interdependency between these three commands; and second, to emphasize the multinational or allied nature of our military mission.

TIMELY REINFORCEMENT OF EUROPE IS CRITICAL

NATO's ability to defend on the ground, at sea, and in the air in Europe, which is the primary mission of the Supreme Allied Commander in Europe, is absolutely dependent on the abilities of the Supreme Allied Commander Atlantic and the Allied Commander in Chief Channel to permit the timely reinforcement of Europe and to project ashore.

Fight as Allied Commander Europe

ACE—AFNORTH, AFCENT, AFSOUTH.

It is important to realize U.S. forces will fight as a part of the combined force as Allied Command Europe, and not as the U.S. European Command. Our strategy, our doctrine, and our command and control will be allied.

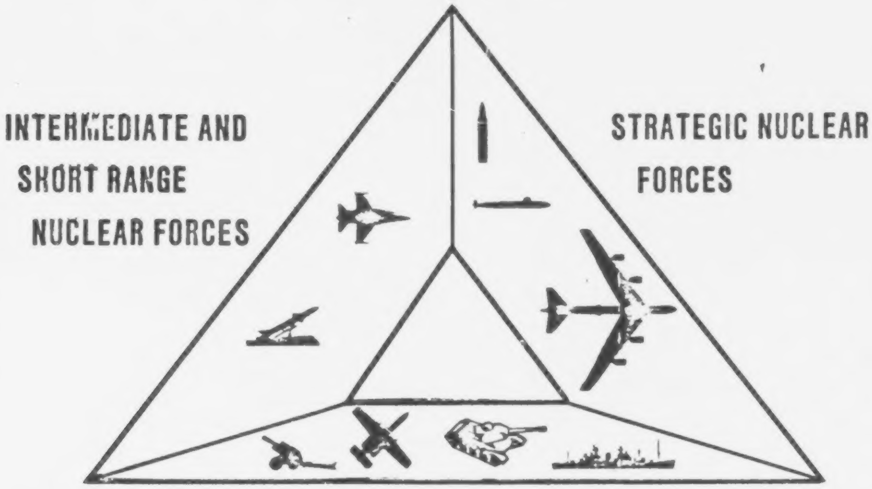
This is the context in which we and our allies will win or lose.

MISSION TO DETER WAR

Simply put, our mission is to deter war. This means the Warsaw Pact must perceive that NATO can make and sustain a credible defense if attacked, and that the penalties for attacking would be unacceptable.

NATO STRATEGY

FLEXIBLE RESPONSE



The Alliance promulgated its basic deterrent strategy of flexible response in 1967, and that strategy continues to serve us well. Flexible response is based on the maintenance of a triad of forces: conventional forces, short and intermediate range nuclear forces, and strategic nuclear forces.

Today and in the near term, our CINC's greatest concerns have to do with strengthening the conventional leg of this triad.

FORCE MODERNIZATION

Upgrading intermediate-range nuclear weapons enhances deterrence.
Pershing II missiles in West Germany.

We can take great satisfaction as a nation and as an alliance over the progress of both the U.S. and British strategic modernization programs and over the continuing deployment of modern intermediate range nuclear forces in the United Kingdom, Italy, West Germany, Belgium, and The Netherlands. Progress to date and anticipated completion of these efforts have not only enhanced deterrence, but have also allowed for alliance agreement on the overall reduction of nuclear weapons based in Western Europe.

Senator LEVIN. Before you proceed to the next slide, let me just interrupt you as we go along here. We do not have to follow any strict rule.

Going back—and you do not have to go back a couple of slides. But a couple of slides ago you indicated that the Warsaw Pact would have to contend with an alliance and not just with American forces.

How many multinational units are there in NATO?

General WOOD. That is a difficult question to answer, because if you take the Germans, for instance, their air force is committed entirely to an allied role. And so, even though it might be a German only air force, it is seen as an allied unit.

Senator LEVIN. My question is, How many units are made up of nationals from more than one country?

General WOOD. Except for NATO Airborne Early Warning Force, none that I am aware of right now. The French and Germans are investigating putting together a unit, but at the moment they are all under national control.

Senator LEVIN. Do you know whether some years ago there was an experiment or thought of having multinational units in that sense?

General WOOD. I do not have a historical perspective on that.

Senator LEVIN. Would you check your archives and let us know about that?

General WOOD. Yes, sir.

Senator LEVIN. Before you leave the nuclear forces, which I think you are about to do right now, does the double zero option affect that deterrent?

General WOOD. It obviously does. The question is to what degree.

Senator LEVIN. What is your conclusion on that?

General WOOD. I would have to say that we would go along with General Galvin's view which he espoused for the first time last Friday in a speech, in which he said if the negotiations at Geneva result in agreement on the zero-zero option, the global elimination of all U.S. and Soviet land-based, longer range and shorter range, intermediate nuclear missiles, NATO's strategy of flexible response would still be valid.

However, the means to implement NATO's strategy will require buttressing. Otherwise, there will be a higher risk than we in the West should accept.

Senator LEVIN. Would you read that last sentence again?

General WOOD. However, the means to implement NATO's strategy will require buttressing. Otherwise, there will be a higher risk than we in the West should accept.

Senator LEVIN. Does he go on to explain the kind of buttressing that he believes is required in order to avoid the unacceptable risk in that statement, or do you have a statement?

General WOOD. No, sir, but in a discussion that the staff had with him last week he pointed out that he did not believe, as General Rogers did, that it was necessarily a bad thing. He believes that deterrence is the important consideration. What it takes to deter is a combination of things, and if in fact we go to zero-zero the buttressing would have to come through several actions, [deleted] and completing the conventional commitments that we have already started in Europe.

Senator LEVIN. Does he feel that it is the commitment to do that buttressing which is required or the actual buttressing that is required prior to the implementation of the double zero option?

General WOOD. I am not aware of his position on that, sir.

Senator LEVIN. Thanks.

General WOOD. Let us go to the next viewgraph, Jim.

FORCE MODERNIZATION

Need to improve conventional forces.
U.S. multiple rocket system.

Conventional strength and modernization is yet another story. All of the NATO nations now recognize the need to pay more attention to improving conventional forces to enhance our deterrence of nonnuclear conflict. That aspect of deterrence is presently in jeopardy because of the continuously improving conventional military capabilities of the Warsaw Pact.

We assess that the current conventional imbalance reduces the credibility of our conventional deterrence and would essentially force NATO into an early and agonizing decision on the first use of nuclear weapons. I will say more about that observation later in the briefing.

DEFENSE OF EUROPE

Threat.
How we fight.
Implications.
Issues.

I will now address how we go about our mission of deterrence. I am sure you have seen the red versus blue charts which attempt to show with numbers the balance of capability between NATO and the Warsaw Pact. While such a tabular approach has value, it is something that is available to you routinely, and I will not provide you another "bean count" today. Still, it is important to restate some points that, while obvious, are nonetheless at the heart of understanding NATO's military situation.

WARSAW PACT MILITARY FORCES

- **GROUND FORCES**
  - DIVISIONS
  - TANKS [DELETED]
  - SSM LAUNCHERS
  - SAM LAUNCHERS
- **NAVAL FORCES**
  - AIRCRAFT CARRIERS
  - COMBATANTS
  - SUBMARINES
  - NAVAL AVIATION
  - SLBMs [DELETED]
- **AIRCRAFT**
  - BOMBERS
  - TACTICAL
- **SS-20 TELS**

Your staff has asked, Senator Levin, that we perhaps hurry through this threat part, and so I will not deal with the text in its entirety on each of these items.

General WOOD. First, the Warsaw Pact is not a defensive alliance, despite its claims.

[Additional information follows:]

It is a vehicle for the Soviet Union to influence Eastern Europe and use the resources of the nations within its sphere to acquire superior military power. That military power would be obvious in a war, but even its potential serves to influence the thinking of any nation that opposes the Soviet Union. By just about every measure, the Warsaw Pact has far more military strength today than can be reasonably justified for defense.

FUNDAMENTAL FACTS

• PACT FORCES IN EUROPE V. NATO FORCES IN EUROPE

TANKS	3 : 1
ARTILLERY PIECES	3 : 1
ARMORED VEHICLES	3 : 1
ATTACK HELICOPTERS	2 : 1
FIXED WING TACTICAL AIRCRAFT	2 : 1

• RATIOS GETTING WORSE

Second, the Soviet approach to superior military power still relies largely on the fielding of massive forces, more troops, more tanks, more aircraft, and more ships than their potential adversaries.

[Additional information follows:]

Although it has been said many times, it remains true that active NATO forces are outnumbered. And NATO forces must expect to be outnumbered, even after mobilization. Further, mobilization will do nothing to redress a 3:1 disadvantage in numbers of tanks, artillery pieces, and armored vehicles; and a 2:1 disadvantage in attack helicopters and fixed-wing tactical aircraft.

NIZHNIY TAGIL TANK PLANT

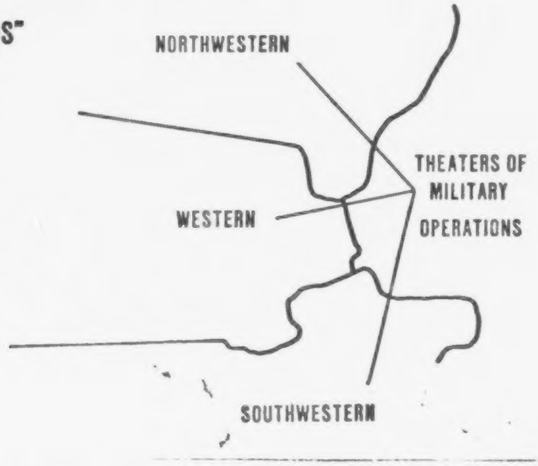
Third, Pact forces are constantly improving.

[Additional information follows:]

The amount of industrial capacity devoted to weapons production allows for a continuous modernization of equipment. Large numbers of new tanks, guns, aircraft, etc. enter the Pact inventory every year.

REORGANIZATION OF FORCES

- BETTER WARFIGHTING STRUCTURE
- NEW "UNIFIED COMMANDS"
- COMBINED ARMS UNITS



A less visible, but perhaps more significant, improvement to Pact forces in general and Soviet forces in particular over the last 6 years has been a major reorganization.

[Additional information follows:]

A new command structure has been established which reflects in peacetime the command relationships which the Pact would use in war. Further, the command relationships at lower levels have been changed to reflect a geographic approach—that is, the commander in a given area will control all the forces in that area, regardless of their service affiliation.

CLOSE COORDINATION OF COMBINED ARMS

The combined arms approach has extended to the tactical level, where we see the Soviets putting increased emphasis not only on cooperation between services, but also between branches of the same service.

[The information follows:]

For example, while the Soviets have always espoused the virtues of close coordination between artillery, armor, and infantry, [deleted]. Additionally, in recent years [deleted] has also been added.

CONTINUED EMPHASIS ON BROAD RAPID OFFENSIVE

Last, Pact doctrine emphasizes a broad, rapid, crushing offensive, designed to use massive armored forces to seize large chunks of territory.

With this as a backdrop, let me examine the trends in Warsaw Pact, ground, naval, and air forces within the European theater.

GROUND FORCE TRENDS

- **CONTINUED DEPLOYMENT OF LARGE AMOUNTS OF NEWLY-BUILT EQUIPMENT**

ITEMS	ANNUAL PRODUCTION (1986)
TANKS	[DELETED]
ARTILLERY	
APCS	
TACTICAL BALLISTIC MISSILES	
TACTICAL SAMS	

In ground forces, modernization is exemplified by the deployment of new tanks, self-propelled guns, armored personnel carriers, and tactical surface-to-surface and surface-to-air missiles.

[Additional information follows:]

With such large ground forces, the Pact takes several years to completely replace its equipment inventory. Thus, there are many older tanks and other items still in use, particularly among non-Soviet forces.

Warsaw Pact Force Modernization

NATO's margin of technological superiority is narrowing.
T-80 tank.

New weapons, such as the T-80 tank and the SS-23 surface-to-surface missile, represent substantial improvements over weapons that they replaced.

[Additional information follows:]

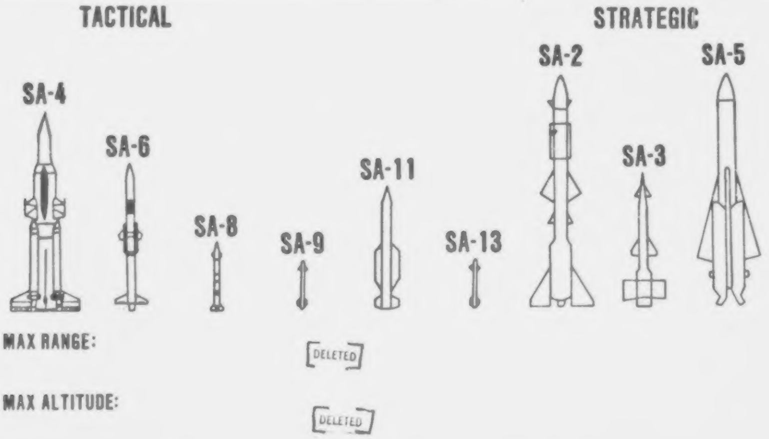
And they sometimes approach or exceed the capabilities of Western systems. While we still hold a qualitative edge in several areas—[deleted]—the margin of superiority is narrowing.

Pact Weapons Increasingly Effective

[Deleted.]

More importantly, Warsaw Pact weapons systems are increasingly effective against the threats that they would face. [Deleted.]

NUMERICAL STRENGTH COMPOUNDS THREAT



In another way, the multiplicity of the weapons complicates NATO's task in attacking a Warsaw Pact ground unit.

[Additional information follows:]

A NATO aircraft would have to pass through a "threat envelope" of several types of surface-to-air-missiles—the tactical and strategic SAMs shown here—as well as several types of anti-aircraft guns, including the new ZSU-X. This multiplicity of systems is characteristic of Pact ground forces.

Pact Tactical Air Forces Trends

Continued deployment of newly built aircraft still in production and annual production—[deleted].

Now being deployed:
Frogfoot—[deleted].
Fulcrum—[deleted].
Flanker—[deleted].

In air forces for theater use, the Soviets rely primarily on a generation of aircraft deployed during the sixties, seventies, and eighties, all of which I am sure you are familiar. Paralleling the developments in the ground forces, modernization of these tactical aircraft is underway.

TACTICAL AIR FORCES TRENDS

- NOW BEING DEPLOYED

SU-25 FROGFOOT
(SIMILAR TO U.S. A-10)

MiG-29 FULCRUM
(SIMILAR TO U.S. F-16)

SU-27FLANKER
(SIMILAR TO U.S. F-15)

The FROGFOOT, a counterpart to the A-10, and the FULCRUM, similar to the F-16, are now deployed in the western U.S.S.R. and Eastern Europe. The FLANKER, similar to the F-15, has now entered the inventory in the U.S.S.R. and [deleted].

UPGRADE OF COMMAND AND CONTROL

MAINSTAY

FULCRUM

GROUND-BASED TACTICAL CONTROLLER

The FULCRUM and the FLANKER both have a look-down, shoot-down capability, which heretofore did not exist with Pact forces in Europe.

[Additional information follows:]

Along with the MAINSTAY AWACS, which will allow for increased mobility and survivability of aircraft command and contol, the FULCRUM and FLANKER represent a serious challenge to NATO's technological superiority in the air. It is already questionable whether our qualitative advantage could overcome a 2:1 disadvantage in numbers.

PACT NAVAL FORCES

BALTIC SEA
• AREAS OF NATO CONCERN
BLACK SEA
MEDITERRANEAN SEA

In naval forces, our primary operational concerns are the Baltic, Black, and the Mediterranean Seas. We are, however, very concerned with the vulnerability of our supply line across the Atlantic.

Enhanced Warsaw Pact Amphibious Capabilities

[Deleted.]

[Additional information follows:]

The Pact's Baltic navies, to enhance their amphibious capabilities, exercise combined amphibious landings year round. Additionally, for over a decade the Pact's Baltic shipyards have pursued an ambitious construction program which has stressed the manufacture of modern amphibious vessels, including air cushioned vehicles. [Deleted.]

BLACK SEA FLEET

DELETED
BLACK SEA
BOSPHOROUS
DARDANELLES

[Additional information follows:]

Pact Black Sea Fleet amphibious forces and naval air forces maintain their readiness by conducting exercises throughout the year. [Deleted.]

SOVIET MEDITERRANEAN FLOTILLA

Would be expanded during any period of tension.
Slava cruiser.

In the Mediterranean, the primary threat to NATO is from the permanently deployed Soviet Mediterranean flotilla. It consists of surface combatants and nuclear and diesel-powered cruise missile and attack submarines.

[Additional information follows:]

The number of Soviet ships and submarines in the Mediterranean would grow quickly during any period of tension, as has been demonstrated over the last 20 years.

NAVAL AIRPOWER

Threatens NATO naval forces.
Backfire.

Further, the Soviets can bring a lot of naval air power to bear over the Mediterranean.

[Additional information follows:]

They use medium bombers, such as the Badger and—especially in the last 10 years—the Backfire, assigned to the Soviet Navy expressly to threaten NATO surface task forces.

SOVIET NAVAL RECONNAISSANCE AIRCRAFT

Deployed to Libya and/or Syria [deleted].
IL-38 May.

Last, Soviet naval reconnaissance aircraft are frequently deployed to Syria and Libya, and [deleted].

In addition to the traditional considerations of conventional ground, air, and naval forces, I need to address chemical warfare, theater nuclear weapons, and logistics.

PACT CHEMICAL WARFARE FORCES

Already in far superior position.
Continued production of equipment.
Continued testing and training.

Warsaw Pact forces are the world's best equipped and prepared forces in the area of chemical warfare. They have large inventories of chemical agents and a variety of delivery means, including artillery, rocket launchers, tactical ballistic missiles, and aerial bombs.

In addition, they have all the necessary defensive equipment and they train frequently in a chemical environment.

PACT THEATER NUCLEAR FORCE TRENDS

Expanded spectrum of delivery means.
SS-20 deployments.
SS-20 canister on launcher.

Regarding nuclear weapons, the Pact's delivery means range from artillery pieces through rockets, tactical ballistic missiles, and aerial bombs, to longer range missiles such as the SS-20.

[Additional information follows:]

The SS-20 is the most well known Soviet intermediate-range nuclear weapon. Since it was first deployed in 1977, its accuracy, multiple warhead capability, range, and mobility have contributed to the shift of the theater nuclear balance toward the Warsaw Pact.

EQUIPMENT STANDARDIZATION

Enhances sustainability.
Simplifies maintenance.
Soviet T-72.
Polish T-72.
East German T-72.

The Warsaw Pact has also taken steps to ensure the sustainability of combat operations against NATO. Many Warsaw Pact arms and equipment are standardized throughout their forces. This helps provide for significantly fewer logistics problems compared to NATO with its various nationally produced arms and equipment.

WARSAW PACT LOGISTICS

Ammunition and fuel stocks forward deployed.

Additionally, the Warsaw Pact has forward deployed vast amounts of ammunition and fuel, with a goal of ensuring as a minimum the availability of 60 to 90 days of those stocks. As an example, Pact forces opposite the central region have [deleted]. Yet their ammunition storage capacity [deleted].

Senator NUNN. What do you say that goal is, and where are they?

General WOOD. Their goal is to have 60 to 90 days prepositioned, [deleted].

Senator LEVIN. What is the actual number of days opposite the central region? 60 to 90 is a pretty broad range. Is it closer to 60, closer to 90, or where?

General WOOD. I think what we have tried to do there is to capture an average—we cannot be that definitive. The capacity of the storage bunkers in particular areas varies, and so we have tried to make the best estimate we could within those parameters.

Senator NUNN. If I could ask one other question, what are the critical items that they would give out of in the shortest period of time?

General WOOD. Of the category of [deleted] that they use, they have more [deleted] than they do the others. They are shortest on [deleted].

Senator NUNN. I am not talking about chemicals. I am talking about the broad category: ammunition, fuel stocks, and other things. You were talking about these areas.

General WOOD. Yes, logistics as a total.

Senator NUNN. Well, NATO gives out on critical munitions within, the last I heard, [deleted] a lot of critical munitions, a lot of critical things. Our fighting capability is no more than [deleted] in many different items. And I'm just trying to get some comparability as to what their weakness is in certain critical items.

General WOOD. I cannot answer that, sir. I will get back to you on that. I am just not conversant in that particular area.

Senator NUNN. Okay, thank you.

Senator LEVIN. On the same subject, what is, first of all, our across the board average? You are going to get to that a few slides later, I guess. But can you give us that?

General WOOD. I am going to touch on the blue side later in the briefing, sir.

Senator LEVIN. Could you give us a figure comparable to that figure you just gave us for the Soviets now?

General WOOD. Let me make sure I give you the right figure.

[Pause.]

General WOOD. We have approximately [deleted] and [deleted]. These are aggregate totals and do not show the critical shortfalls which exist in certain key munitions and repair parts.

Senator LEVIN. Where is that?

General WOOD. In Europe.

Senator LEVIN. Is that in the central region?

General WOOD. In the central region.

Senator LEVIN. Would you repeat that.

General WOOD. That is approximately [deleted]. These are aggregate totals and do not show the critical shortfalls which exist in certain key munitions and repair parts.

Senator LEVIN. That is what we have now?

General WOOD. Yes, sir.

Senator NUNN. That is U.S. forces?

General WOOD. That is U.S. forces.

Senator LEVIN. And what about the European allies' stocks? Is that in what you are going to supply for the record?

General WOOD. I do not know that I have that, since we are briefing from the U.S. European Command perspective and not NATO.

Senator LEVIN. Would you supply those comparable European allies' stock statistics for the record.

General WOOD. Yes, sir.

[The information follows:]

Headquarters, U.S. European Command is a U.S. only headquarters and as such does not track the stocks of our NATO allies.

Senator LEVIN. On this same issue, you used the statement, Pact forces opposite the central region [deleted]. Do you know what Pact forces have opposite the other regions?

General WOOD. Usually when we are speaking of the Pact forces, we tend to think in terms of it being central region, because when you are talking about the northern area, [deleted] those are usually units that are not equipped with quite the same caliber of equipment and capability as across the central region.

And then in the southern area, you are talking more of the Bulgarian and the Hungarian forces, and again they would not be of the same caliber as the Soviets.

Senator LEVIN. Thank you.

General WOOD. I mentioned earlier it is important not to overstate the threat, so let me draw attention to some problems the Pact faces independent of NATO capabilities.

MANPOWER SHORTAGE

Fewer men of service age for next 10 to 15 years.

May Day parade in Red Square.

First is the manpower shortage. To sustain massive forces, the primary requirement is people. And the Pact nations, like the NATO nations, will have fewer young men coming of service age for the next 10 to 15 years.

MANPOWER PROBLEMS

Increasing percentage of minorities.
Declining birthrate among Slavic population groups.
Soviet officer cadets.

Second, the Soviet Union has a problem with an increasing percentage of minorities. This problem exists in part because the Russians are reluctant to integrate non-Slavic soldiers into combat units or place them in positions of responsibility. Unless this policy is changed, it will further compound the manpower problem.

MULTI-NATIONAL COORDINATION PROBLEMS

Significant language problems.
Deliberate mixing of Soviet ethnic groups in units often leads to language problems.

In the Pact forces as a whole, there is also the problem of multinational coordination. While Russian is the official common language of the Pact and the Soviet Union dominates the Pact as no NATO nation dominates the Alliance, there are still problems of coordination.

WARSAW PACT WEAPONS

Fielded equipment is simple and rugged.
Requires less maintenance and training.
BRDM with Sagger anti-tank missile.
Sagger anti-tank missile.

Regarding equipment in general, the Soviet Union has the ability to build weapons as good as and in some cases superior to those built in the West. But across the board, Warsaw Pact weapons show less technological sophistication than do NATO weapons.

To some degree, this is an advantage for the Pact, since simple, rugged weapons, while sometimes less effective in a given instance, often last longer and break less than more sophisticated weapons. They also require less training for the soldier to use them. Further, when the weapons are introduced in such quantity, their numbers will overcome most deficiencies in sophistication.

TECHNOLOGY

Main problem.—Reproduction of sophisticated technology in quantity.

Still, in certain areas, particularly in those concerned with [deleted] a lack of sophistication is a serious drawback. Although the Soviets have demonstrated a capability to match the West in almost every technological area, their main problem has been to reproduce advanced technology in quantity.

TECHNOLOGY

Efforts to Improve Technology Persist.

The Soviets' program to buy, steal, or otherwise acquire computers, numerically controlled machine tools, and robotics saves them considerable amount of time and money in research and development. It also compensates for an economic system that provides very little incentive for a person to do quality work. The success of Secretary Gorbachev's efforts to improve the Soviet industrial infrastructure could go a long way toward enhancing their capability to incorporate new technology.

Having mentioned some of the significant problems of the Warsaw Pact, let me address a facet of their system that yields military advantage, namely the control of information.

Warsaw Pact Advantage

Control of information enhances reliability of forces.
Eastern European forces will fight as long as things are going well.

Control of information is a way of enhancing the reliability of military forces. Russian soldiers know only what they are told. This is true of Eastern European forces as well. If the only thing the Polish, Hungarian, or Soviet soldier believes is that the NATO forces are a threat to their homeland, then they will fight until there is evidence to the contrary. [Deleted.]

DETERRENCE REMAINS OUR OBJECTIVE

In sum, we seek Soviet Warsaw Pact forces as fallible. With the right combination of people, equipment, supplies, strategy, tactics, leadership and will, NATO forces could prevent the Warsaw Pact from achieving its objectives. If this is done in a war, however, we will have failed in our own objective, which is to convince the leaders of the Warsaw Pact that they cannot win and therefore, they should not try. We can only do this by maintaining our deterrent strength.

How ACE Would Fight Today

Key variables.—Political decisions, warning time, and forces available.

Exactly how we would approach a conflict with the Warsaw Pact at any given time depends upon a number of variables. But the key ones are shown here. Obviously, a lot depends on the amount of warning we have and on how the alliance's political decisionmakers, including the United States, use that warning time.

I will first address warning time and then take you from north to south, addressing the forces NATO will use to oppose the Warsaw Pact threat.

WARNING TIME

	PREPARATION TIMES	
	WARSAW PACT	NATO
[DELETED]	[DELETED]	

We have studied the warning problem at length and have settled on two basic situations to guide our planning. They are shown here. Using them will help us prepare for most eventualities.

The times on the left represent how long the Warsaw Pact forces will have to prepare for the attack once their political authorities have made their decision to do so. The times on the right depict how much time NATO would expect to have to prepare defenses before the actual onset of hostilities, assuming the indications and warning system recognizes what is happening and that the NATO political decision is made in a relatively short period.

WAR IN EUROPE

- WILL LIKELY RESULT FROM INCREASED TENSION ELSEWHERE

[Deleted.] A war with the Warsaw Pact, if it ever comes, will probably be a spillover from a superpower confrontation somewhere else, perhaps like the Middle East. This in itself adds considerable uncertainty to our planning, since it could result in the malpositioning of some of the forces we count on and also make them vulnerable to combat attrition.

Assuming this most likely scenario, which provides them [deleted] and [deleted] let us look at the war from SACEUR's perspective, considering the threats he will face and what he would have to work with.

NORTHERN REGION

• WARSAW PACT FORCES SUBSTANTIAL
NORWAY
SWEDEN
FINLAND
USSR

General Wood. In the Northern Region, Warsaw Pact capabilities for a conventional land and air war are less than those we expect to confront the Central Region. The Warsaw Pact forces are substantial, composed of ground forces from the [deleted] plus reserves from internal military districts, such as [deleted] if the Soviets decide such are necessary.

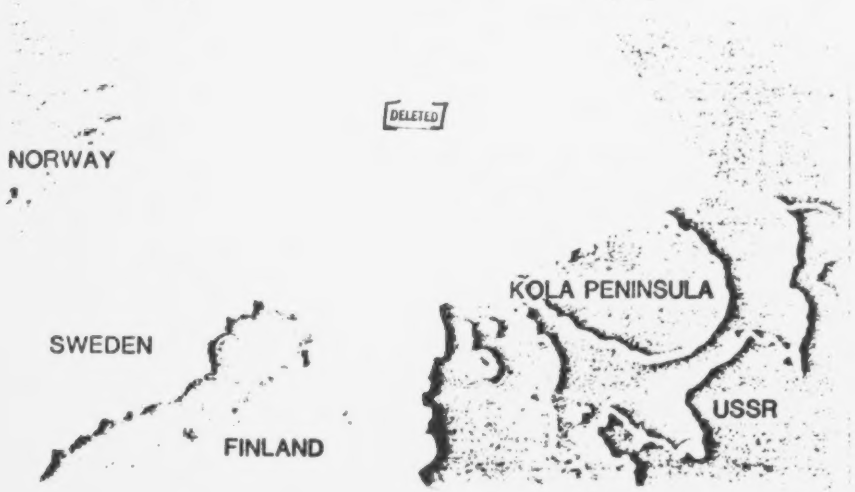
Moreover, NATO would most likely be facing only Soviet forces here, so there will be essentially no multinational coordination problem on the "red side."

NORTHERN REGION

• SOVIET OBJECTIVES
DELETED
DELETED
NORWAY
KOLA PENINSULA
SWEDEN
USSR
FINLAND

The primary Soviet objectives in this region are [deleted] and [deleted].

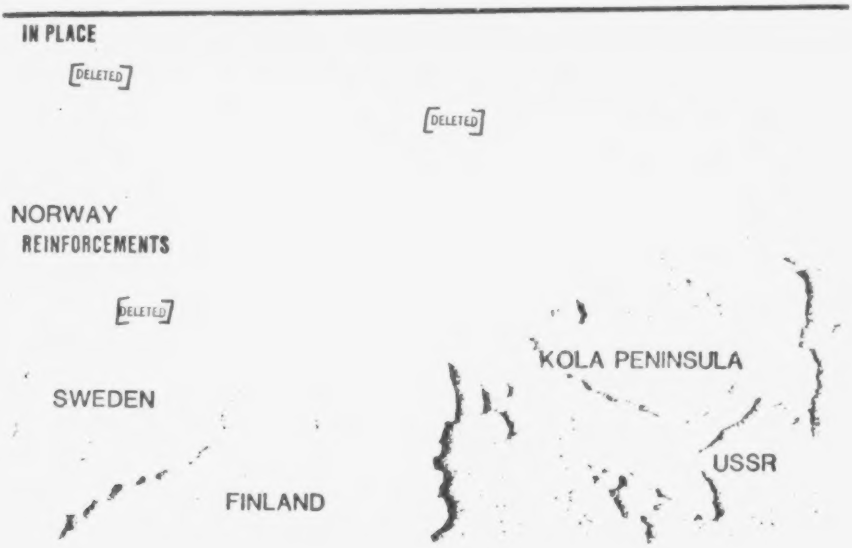
NORTHERN REGION


DELETED
NORWAY
KOLA PENINSULA
SWEDEN
USSR
FINLAND

We believe they would attempt to achieve their objectives with the forces shown here, through a combination of overland invasion, amphibious landings, and possibly airborne assault. [Deleted.]

In this, the Soviets will have the advantages of superior numbers of ground, air, and naval forces, as well as geographical proximity, [deleted].

NORTHERN REGION



On our side, we would expect to repeal the enemy with [deleted]. Reinforcements would be [deleted].

In support, [deleted] in-place air squadrons will be reinforced by [deleted] others from Canada, the United Kingdom, and the U.S.

NORTHERN REGION

Difficult terrain and climate.

Some of the factors favoring the defense of this area are the difficult terrain and, depending on the time of the year, the climate that the attacker would confront, as well as the [deleted.] In addition, Soviet forces in this area tend to have older equipment than those in central Europe, and the priority for reinforcement in the north would probably be lower than in the center.

[Chart deleted.]

Despite these constraints, the superior numbers should tell. [Deleted.]

BALTIC SEA

NORWAY
SWEDEN
DENMARK
[DELETED]
BALTIC SEA
[DELETED]
USSR
EAST GERMANY
WEST GERMANY
[DELETED]
POLAND

In the Baltic, we expect to confront the combined naval and naval air forces of East Germany, Poland, and the Soviet Baltic fleet. [Deleted.]

We also anticipate [deleted].

BALTIC SEA

NORWAY
SWEDEN
[DELETED]
DENMARK
IN PLACE
[DELETED]
BALTIC SEA
[DELETED]
USSR
REINFORCEMENTS
[DELETED]
EAST
GERMANY
[DELETED]
WEST
GERMANY
POLAND

To support the land battle in [deleted]. These would be reinforced by [deleted].

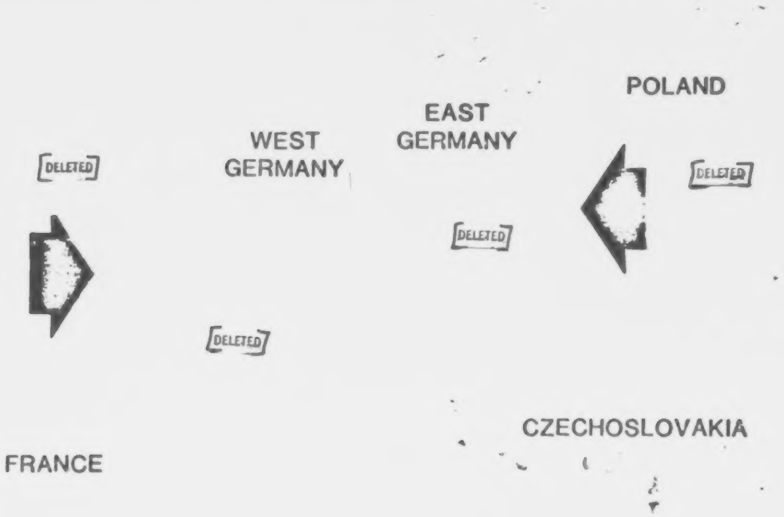
[Chart deleted.]

Defense against the [deleted] would involve [deleted] and resisting with in-place home defense forces. To secure the [deleted] and a defense in depth will be provided by [deleted] backed up by the [deleted].

Air support will come from about [deleted] in-place aircraft and [deleted] reinforcements.

Because of our [deleted] we estimate our defense would hold for about [deleted] before Pact forces could seize their initial objectives and then begin to [deleted].

CENTRAL REGION


POLAND
EAST GERMANY
WEST GERMANY
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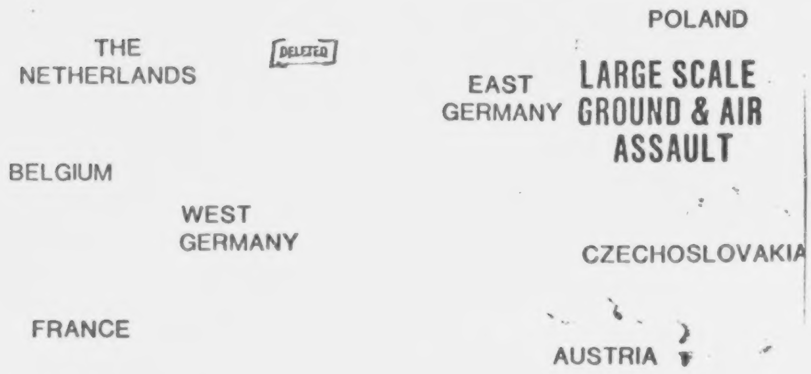
CZECHOSLOVAKIA
FRANCE

The center of Europe contains the preponderance of both NATO and Pact ground and air forces in the theater. Again, NATO forces are outnumbered, but the precise numerical disadvantage will depend upon the length of time each side has had to mobilize and forward deploy its forces.

In Central Europe, the Pact could attack with about [deleted] divisions, supported by up to [deleted] aircraft. [Deleted] other divisions are also available for follow-on forces.

Facing them, Allied Forces Central Europe would have about [deleted] in-place divisions and [deleted] tactical aircraft. [Deleted.] Additional British and [deleted] U.S. divisions and [deleted] British, Canadian, and U.S. aircraft could arrive before the outbreak of hostilities.

CENTRAL REGION


POLAND
THE NETHERLANDS
DELETED
EAST GERMANY
LARGE SCALE GROUND & AIR ASSAULT
BELGIUM
WEST GERMANY
CZECHOSLOVAKIA
FRANCE
AUSTRIA

[Deleted] we envision an attack of at least [deleted]. This attack will rely heavily on tanks and artillery. Quite frankly, we are terribly outgunned here. In conjunction with ground attacks, we expect large air attacks, aimed principally at negating NATO's ability to employ nuclear weapons in the theater.

Air Attacks on These Targets

Airfields.
Nuclear weapons storage sites.
Command and control facilities.
Nuclear delivery systems.

The air attacks will concentrate on these targets.

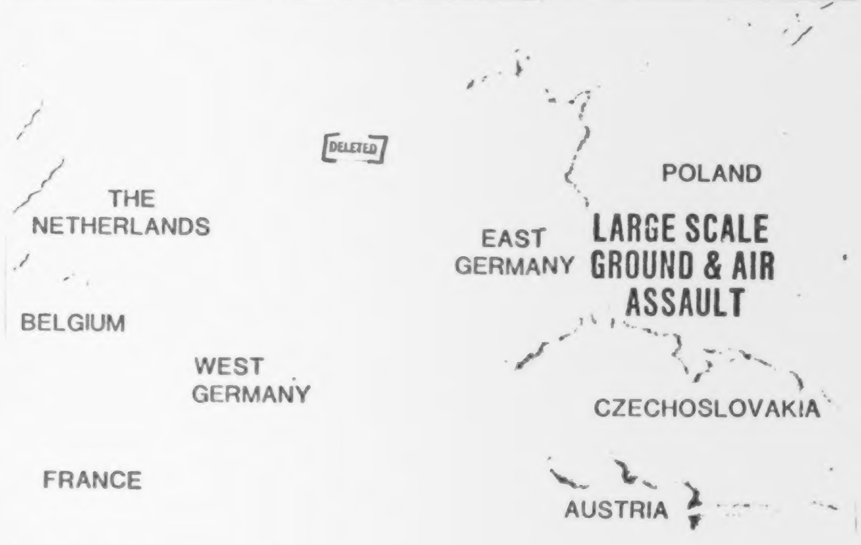
Soviet special purpose forces will also be used to locate and/or attack such facilities.

Warsaw Pact Difficulties

Coordination of multi-national forces.
Reliability of East European Forces.
Heavy burden on logistics system.

In such a scenario, the Pact will face some difficulties besides the obvious one of resistance by NATO forces. These are shown. Still, the central region is where the Soviets put the most forces, their most ready forces (in terms of manning levels and training), and their most modern equipment.

CENTRAL REGION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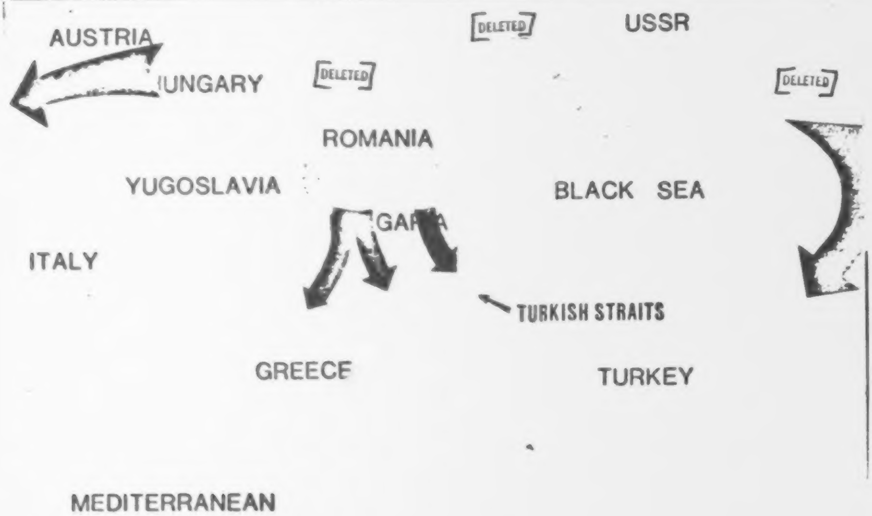
POLAND
THE NETHERLANDS
EAST GERMANY
LARGE SCALE GROUND & AIR ASSAULT
BELGIUM
WEST GERMANY
CZECHOSLOVAKIA
FRANCE
AUSTRIA

[Deleted.]
[Chart deleted.]
[Deleted.]

SOUTHERN REGION


DELETED
USSR
AUSTRIA
HUNGARY
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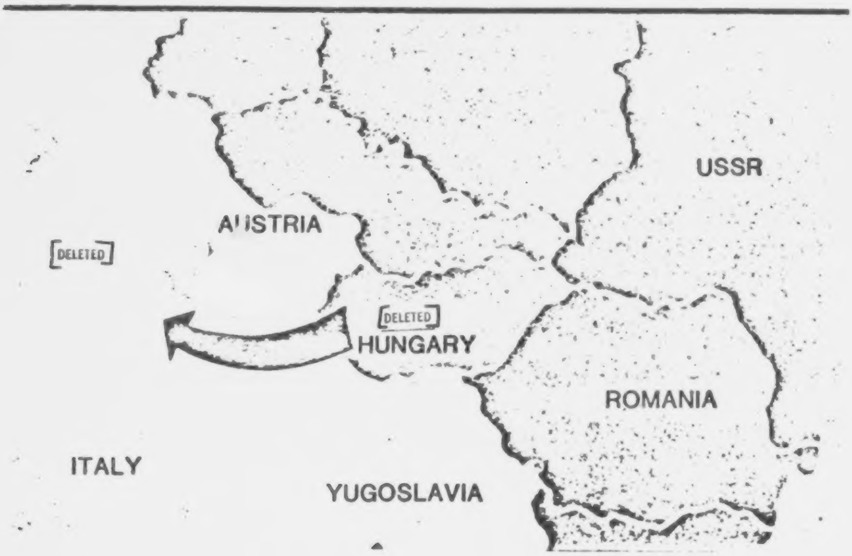
DELETED
ROMANIA
YUGOSLAVIA
BLACK SEA
BULGARIA
ITALY
TURKISH STRAITS
GREECE
TURKEY
MEDITERRANEAN

On the southern flank, we foresee a Warsaw Pact strategy of supporting the attack into the Central Region by conducting an attack into northern Italy, an attack through Turkish Thrace aimed at the Turkish Straits, an attack into eastern Turkey from the Transcaucasus, and a naval battle in the Mediterranean. The land and air forces in this area are less than those which would be involved in Central Europe, while the naval forces are far greater than those involved in the Baltic. In most categories, NATO forces are not as badly outnumbered as they are in the Central Region, and Pact forces face more difficult terrain in trying to reach their land objectives.

[Chart deleted.]

In northern Italy, the ground force threat could consist of up to [deleted] supported by about [deleted] aircraft.

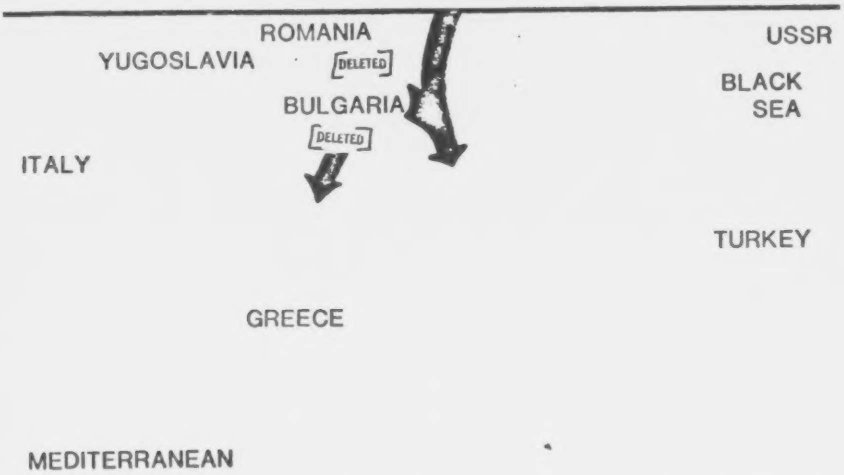
SOUTHERN REGION



NATO forces in this area include the equivalent of [deleted] and [deleted] aircraft, reinforced [deleted] and [deleted] aircraft. We believe NATO forces can hold the [deleted]. Here again, sustainability would determine the length of the battle.

[Deleted.]

SOUTHERN REGION


ROMANIA
YUGOSLAVIA
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BULGARIA
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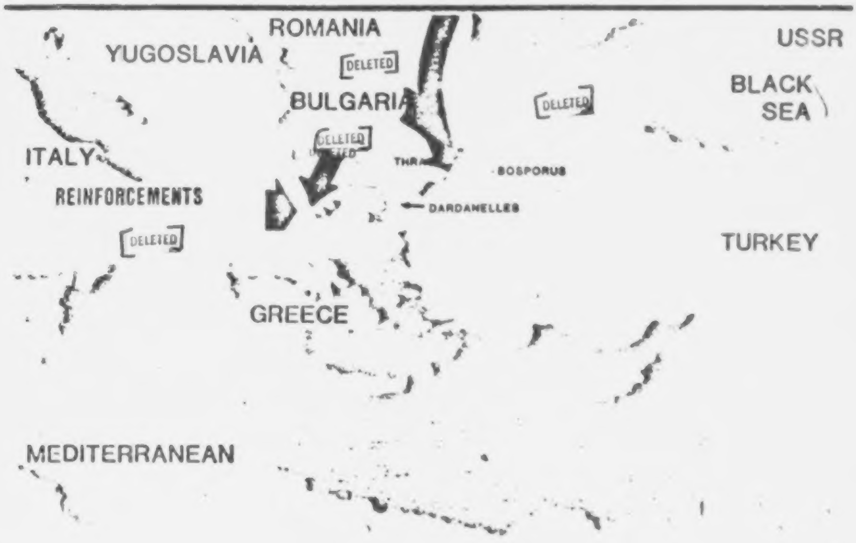
USSR
BLACK SEA
ITALY
TURKEY
GREECE
MEDITERRANEAN

Along the Balkan front, we would face as many as [deleted] supported by over [deleted] aircraft.

[Chart deleted.]

Within Greece, the border is fortified and the [deleted] Greek divisions presently positioned along the main avenues of approach could be augmented by [deleted] additional divisions within [deleted] hours. Tactical air operations would be carried out by [deleted] in-place aircraft. Reinforcements include a [deleted] and [deleted] aircraft. Here the terrain initially favors the defense, but once penetrated it opens up quickly.

SOUTHERN REGION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BULGARIA
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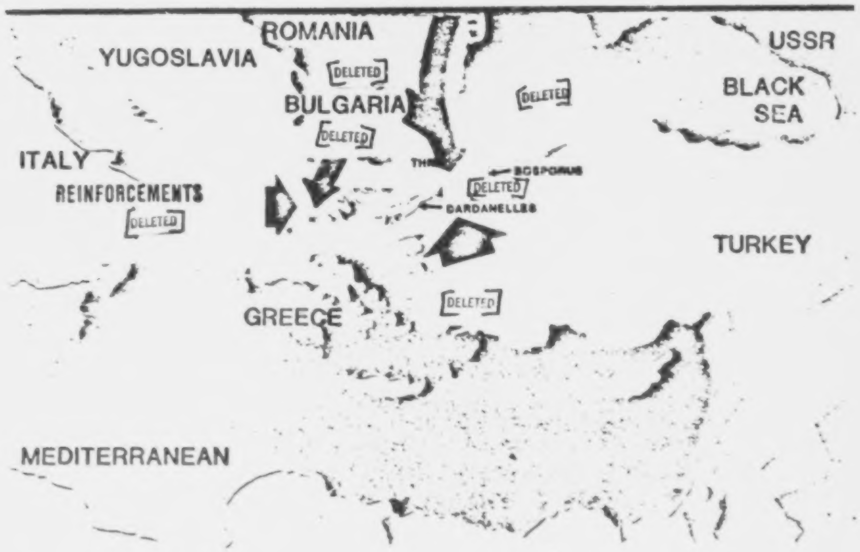
DELETED
THRACE
BOSPORUS
DARDANELLES
USSR
BLACK SEA
ITALY
REINFORCEMENTS
DELETED
TURKEY
GREECE
MEDITERRANEAN

Turkish Thrace, on the other hand, consists of open rolling plains, and Pact forces would seek to gain quick control of the Bosporus and Dardanelles to provide access to the Mediterranean for their Black Sea Fleet. In addition to an overland attack, we expect to see [deleted].

SOUTHERN REGION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USSR
BLACK SEA
ITALY
REINFORCEMENTS
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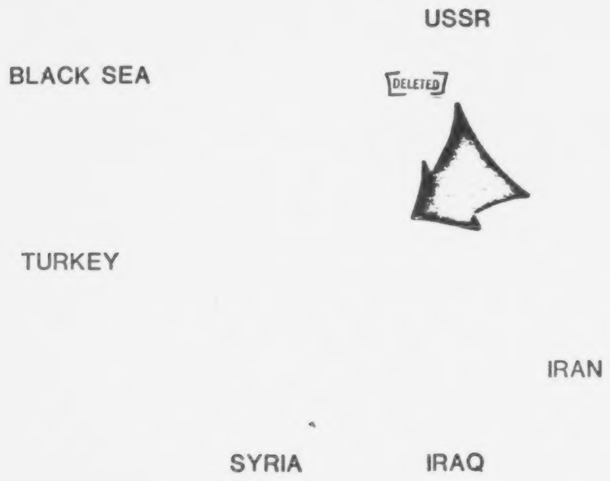
TH
BOSPORUS
DELETED
DARDANELLES
TURKEY
GREECE
DELETED
MEDITERRANEAN

The Turks can have about [deleted] divisions in place within [deleted] hours, backed by [deleted] in-place aircraft and [deleted] reinforcement aircraft. [Deleted.]

We assess NATO forces could frustrate a land drive toward the straits [deleted].

SOUTHERN REGION



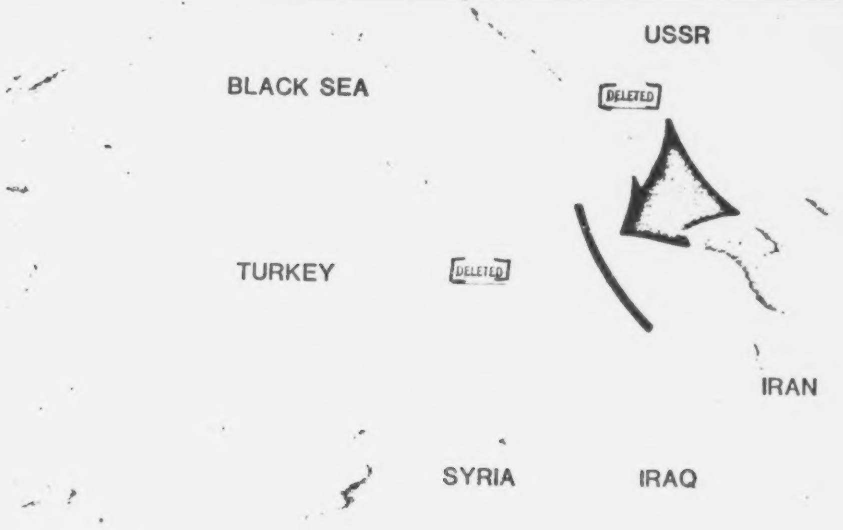
Eastern Turkey is one of NATO's high risk areas, since the Soviets maintain large forces in the Transcaucasus and North Caucasus military districts, about [deleted] divisions and [deleted] aircraft.

[Chart deleted.]

Turkey is at an extreme disadvantage in this area, both quantitatively and qualitatively, with only [deleted] divisions, about [deleted] tanks, and about [deleted] aircraft, [deleted].

The defense makes best use of the mountainous terrain to create barriers, to canalize the attacking forces, and to attack the follow-on forces.

SOUTHERN REGION


USSR
BLACK SEA
DELETED
TURKEY
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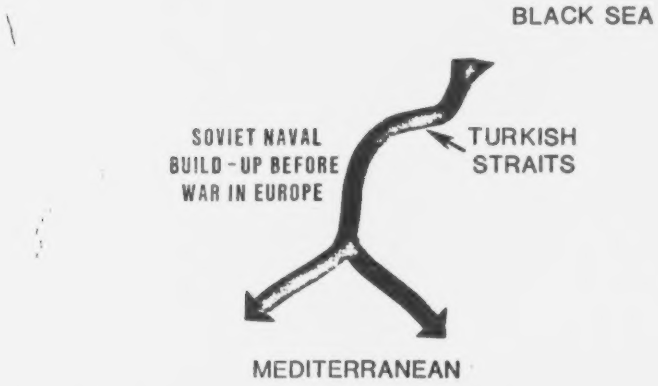
IRAN
SYRIA
IRAQ

We assess Turkey could hold [deleted].

MEDITERRANEAN


BLACK SEA
SOVIET NAVAL BUILD-UP BEFORE WAR IN EUROPE
TURKISH STRAITS
MEDITERRANEAN

In the Mediterranean, Soviet naval forces will be built up before the shooting starts, as the Soviets recognize the danger of having their Black Sea Fleet bottled up by NATO control of the Turkish Straits. It is common during periods of tension for the Soviets to augment their Mediterranean squadron until it is equal to or greater than the size of the NATO naval forces in the area. This is almost surely going to be the case prior to a general war in Europe.

MEDITERRANEAN

Naval war will be intense.

Because of the relatively confined waters and the large number of ships, the naval war in the Mediterranean will be intense. We expect NATO forces to be able to continue to operate there, but only [deleted].

EXPECTED OUTCOME

THREAT AREA	RESULT
NORTH NORWAY	STALEMATE WITH HEAVY LOSSES ON BOTH SIDES;
BALTIC	[DELETED]
CENTRAL EUROPE	
NORTHERN ITALY	STOP WP ATTACK AT [DELETED] [DELETED]
THRACE	GREEK AND TURKISH ARMIES HOLD AT BARRIERS [DELETED]
EASTERN TURKEY	TURKISH ARMY HOLDS [DELETED] [DELETED]
MEDITERRANEAN	HEAVY LOSSES ON BOTH SIDES

Summarizing all of the areas discussed, here is what we would expect if war broke out this year.

ACE CONCEPT OF OPERATIONS

Subconcepts.
[Deleted.]

The Allied Command Europe concept of operations for dealing with the situations just described has three aspects or sub-concepts, as shown. We visualize that in-place forces or those that are near their wartime position will engage the lead enemy divisions, while our air forces delay and disrupt the follow-on divisions.

[Chart deleted.]

The second aspect of the concept hinges on reinforcements being in place and capable of stopping or defeating the second echelon should it push through the first echelon and engage the NATO defenses.

ADVANTAGES OF ACE APPROACH

[Deleted.]
British Tornado.

Finally, the third aspect is to attack the enemy's follow-on forces throughout the depth of the battlefield. The current challenge is to acquire the necessary means to achieve the full benefits of this concept in the future. Our ability to attack follow-on forces buys us the initiative, provides relief from the full weight of the potential attack, carries the war to the enemy, and gives our defensive forces room to maneuver to their advantage.

MAJOR CONCERNS

Readiness and sustainment.
Reaction to warning.
Chemical warfare posture.
Maximizing the conventional defense.

From a strategic standpoint, there are a number of things which concern us about the threats just described and our ability to deal with them. These are the kinds of concerns which we worry about most, and we would like to look at each of them in turn.

NATO'S LOGISTICS SUSTAINMENT

Credible deterrence requires sustainability.

The readiness and sustainment of our forces remains one of the fundamental problems for NATO in all regions. As you saw earlier, our capability to maintain an initial defense is about [deleted] days.

The alliance nations recognize that they must ensure appropriate readiness and adequate sustainability for forward stationed and early reinforcing units.

NATO'S LOGISTICS SUSTAINMENT

Credible deterrence requires sustainability.
Austerity impacts most on sustainability.

However, too often in the past within the alliance we have seen readiness and sustainment be the first and hardest hit area in times of declining defense budgets. Even though the NATO defense ministers have agreed upon a conventional defense improvement program, long-standing sustainment problems will continue to plague the alliance.

NATO'S LOGISTICS SUSTAINMENT

Credible deterrence requires sustainability.
Austerity impacts most on sustainability.
Progress seen, but major problems remain.
U.S. F-16.
U.S. 155mm Howitzer.

U.S. forces in Europe are now more robust and operationally capable than at any time in recent memory. This is due to our ability to operate and maintain our equipment, to provide realistic training for our people, and to exercise with our allies. But we still have inadequate support for our combat troops and shortages of critical spare parts, major end items, ammunition, and medical facilities. These reduce NATO's ability to exploit fully the forces assigned.

Therefore, we believe it appropriate to outline some of our major concerns that, if rectified, would most enhance the U.S. contribution to NATO.

NATO'S LOGISTICS DEFICIENCIES

Noncompletion of POMCUS.
Inadequate/malpositioned equipment and ammo.
[Deleted.]
Inadequate air and sealift.
[Deleted.]

Shortfalls in medical support.

From an alliance perspective, NATO's most serious readiness and sustainment deficiencies can be summarized as shown.

REINFORCEMENT OF NATO

COMMITMENT

6 divisions and 60 fighter squadrons by M+10.

The value of the U.S. contribution to the alliance rests on sustaining our forward deployed forces and meeting our commitment to reinforce Europe with an additional six divisions and 60 fighter squadrons by mobilization day plus 10.

REINFORCEMENT OF NATO

ONLY VIABLE SOLUTION

Forward-positioned equipment.
Pre-positioned war reserves.
Adequate strategic lift.

This can only be accomplished through the balanced use of forward positioned equipment in POMCUS, prepositioned war reserve materials, and strategic air- and sea-lift.

POMCUS

Requirement: Equipment for [deleted] units.
Completion of POMCUS depends upon: storage site construction and equipment purchases.
POMCUS vehicles.

[Deleted.]

POMCUS

Completion of POMCUS depends upon: storage site construction and equipment purchases.

Completion of the POMCUS Program is dependent upon two factors, storage site construction and equipment purchases. The NATO infrastructure program now programs for construction of all but [deleted] of the required controlled humidity warehouses by fiscal year 1997, a significant achievement.

However, for a viable NATO defense strategy, it is very important that the POMCUS Program of six division sets and the [deleted] be completed sooner.

USEUCOM PRE-POSITIONING GOALS

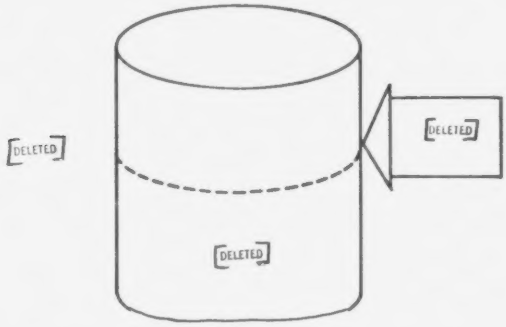
[Deleted.]

The goal for prepositioned war reserve materials is not being met. Our midterm prepositioning objective is [deleted] days of supply for the items shown here. Examples of critically short items include [deleted] as well as [deleted] to name only a few.

We are encouraged by the increases in sustainability for equipment and spares over the past year. Continued effort is needed in this area.

CRITICAL ITEMS

PRE-POSITIONED WAR RESERVE MATERIAL STOCKS



We have developed a list of "critical items," some of which are considered to be "war-stoppers." These are prepositioned war reserve materiel stocks which are critically short, but nonetheless essential to sustaining our conventional war-fighting capability. Categories include those shown here. The criteria to make our list are for those items to be at less than [deleted] percent fill or less than [deleted] days of supply.

[Chart deleted.]

The U.S. contribution to NATO also requires sufficient combat support and combat service support forces. [Deleted.]

[Chart deleted.]

[Deleted] fillers are required for forward deployed combat support and combat service support units, and [deleted] people representing [deleted] units must come from the United States to flesh out the logistics force structure needed on mobilization day. An additional [deleted] people in over [deleted] units must also be deployed by mobilization day plus [deleted] to support our deploying divisions.

[Chart deleted.]

[Deleted.] Furthermore, over [deleted] percent of these units are in the continental United States, [deleted] of them being Reserve component units, [deleted]. The Army is studying this problem in concert with the European Command, the Joint Chiefs of Staff, and the Office of the Secretary of Defense.

[DELETED]

Wartime host nation support helps.

These mobilization day plus 10 requirements take into account the provision of wartime host nation support. West Germany will provide up to 93,000 reservists and a variety of functions and support from civilian sources. [Deleted.]

Although the wartime host nation support agreements with the allies will provide considerable help, they are not a panacea.

STRATEGIC LIFT

For airlift:
Completion of C-5B and KC-10 programs.
Early fielding of C-17.

With respect to our reinforcement, past congressional support for improving the existing C-141 and C-5 fleets, when coupled with the added C-5B's and KC-10's, represents a good step forward. Without early reinforcement, we will quickly face the choice between escalation to the use of nuclear weapons or capitulation.

Therefore, we believe it is crucial that initial strategic airlift improvement programs go forward, together with the earliest and full fielding of the C-17.

STRATEGIC LIFT

For Sealift:
Fast Sealift ships.

Along with prepositioning and airlift enhancements, sealift improvements are also essential. The completion of the eight SL-7 ship conversions to fast sealift ships enhances our ability to meet our requirements. East coast-berthed fast container and roll-on, roll-off ships can load, sail to, and discharge cargo in Central European ports in about [deleted] which will be critical during the early phases of deployment.

STRATEGIC LIFT

For Airlift:
Completion of C-5B and KC-10 programs.
Early fielding of C-17.
For Sealift:
Fast Sealift ships.
Flatrack and sea sheds programs.
Dockside unloading.

However, shipping trends continue to reflect an increase in container capable vessels and a decrease in break bulk shipping which is more desirable for deploying unit equipment. Therefore, it is important that the U.S. Navy's Flatrack and Sea Shed programs be supported.

Flatracks will allow U.S. forces to use container ships for loading unit equipment and sustainment resupplies. Without the Flatracks, much of this materiel, will not otherwise fit into a container ship.

STRATEGIC LIFT

For Sealift:
Fast Sealift Ships.
Flatrack and Sea Sheds Programs.
Maritime Pre-positioned ships.
Ready Reserve force.
Sealift Readiness program.

The Military Sealift Command's charter program for 13 maritime prepositioned ships of new or converted roll-on, roll-off design is another example of a positive contribution to the rapid reinforcement of NATO.

In a similar vein, the ability to call up ships in the Ready Reserve Force and Sealift Readiness Program, though not as responsive as desired, provides a source of ship bottoms that can be tapped prior to the release of the NATO shipping pool or to flesh out sealift assets furnished by NATO.

Co-Located Operating Bases

Facilitate early deployment of TAC Air.
Need minimum essential facilities.
NATO infrastructure support.

Through colocated operating base agreements, existing European airfields are made available to U.S. reinforcing air units. To increase the readiness and sustainability of these units, we need minimum essential facilities, fuel and ammunition for [deleted] of operations, and parking for the first days of the conflict, which must be provided from NATO infrastructure funds. The U.S. contribution to the NATO infrastructure account represents about 28 percent of the total and, if provided, helps to ensure these critical benefits are available.

Wartime Medical Support

Shortfall: U.S hospitalization capability.

Another readiness and sustainability concern is wartime medical support for our wounded. [Deleted.]

Wartime Medical Support

Shortfall: U.S. hospitalization capability.
Resolution: Interim host nation support.

To eliminate this shortfall, our allies have agreed to provide over [deleted] fully staffed hospital beds during the early days of conflict. But these host nation beds are only an interim solution.

In the medical area, civilian hospitals with sufficient capacity are [deleted]. The absence of hospital bed space in those areas represents a significant problem for battle casualty treatment.

Wartime Medical Support

Shortfall: U.S. hospitalization capability.
Resolution: Interim host nation support and pre-positioned U.S. medical assets.

We need to preposition additional U.S. medical assets to provide for care and evacuation of casualties. This requires sustaining the acquisition of medical assemblages and the austere shelters necessary to make them fully operational as wartime hospitals.

CARING FOR WOUNDED

We are concerned that several key war reserve military construction projects were deleted from last year's budget and appear at risk in the current budget. We believe our proposal for a combination of host nation support and U.S.-provided programs is the optimum approach to caring for our wounded and for rapidly returning to duty those patients who can recover within the limit of the theater evacuation policy.

Troop Strength Ceiling

Strength limited to 326,414.
Commander-in-Chief, U.S. European Command is single authority.

A final readiness and sustainability concern relates to the limits placed on U.S. military European troop strength by the 1985 Department of Defense Authorization Act, which limits our strength to 326,414.

In response to the ceiling, the Joint Chiefs appointed the U.S. Commander in Chief Europe as the single authority for all forces operating in the theater——

TROOP STRENGTH CEILING

Commanded-in-Chief, U.S. European Command, is single authority.
Forces counted against ceiling:
Component forces.—USAREUR, USAFE, USNAVEUR.
Rotational forces.
Forces on Atlantic Islands.
"Stovepipe" organizations.—Space Command; Intelligence Agencies; Attachés and Embassy guards.

To include not only the Component forces, but also rotational units, those forces on the Atlantic islands, and theater "stovepipe" organizations, such as Space Command, and those in the National Foreign Intelligence Program.

To manage these forces, we have developed a data base which allows USCINCEUR to look at the force structure to the unit level, and it has proven very useful in giving the unified commander more control and insight over the disposition of the forces he would employ in wartime. However, we believe that we have reached the limit on the ceiling's benefits and that it is now having an adverse impact on our ability to deal with the threat.

EFFECTS OF ETS

Some examples:
OV-10 Wing returned to States.
Air Defense Battalion returned to States.
[Deleted].

Force structure cuts so far have totaled 6,800. Examples include returning an OV-10 wing and an air defense artillery battalion to the States and [deleted].

Moreover, program cuts have totaled some [deleted] spaces. These cuts include [deleted].

EFFECTS OF ETS

Civilianization of more than [deleted] spaces.
Reliance on contract maintenance.

In addition, we have had to civilianize over [deleted] spaces and been forced to go to contract maintenance for many of our requirements, especially in our [deleted] where we believe we have reached the prudent limits of civilianization.

EFFECTS OF ETS

Lower nuclear threshold.
U.S. GLCM.

These actions have been accomplished at a price. We have cut those functions we can best do without to accommodate ground-launched cruise missile growth within the ceiling. In essence, we are lowering the nuclear threshold by decrementing theater conventional capability. What really hurts is that this arbitrary ceiling prevents us from adjusting to the ever-increasing threat.

WARSAW PACT HAS NO TROOP STRENGTH CEILING

The fact remains, the Warsaw Pact has no troop strength ceiling. We, just as they do, also need the ability to deploy our forces where needed and in the numbers that are needed.

Accordingly, the Secretary of Defense has approved a continued effort to remove the ceiling as part of the President's fiscal year 1988 budget submission to Congress.

Major Concerns

Readiness and sustainment.
Reaction to warning.
Chemical warfare posture.
Maximizing the conventional defense.

Our second major concern has to do with NATO's ability to make timely decisions in response to warning that an attack is imminent. As discussed earlier, we have examined potential warning times, and in no case are they long in relation to NATO's ability to achieve its full military potential. It is obvious that we cannot afford to waste any time.

Reaction to Warning

Key to realizing NATO's full military potential.
NATO decisionmakers must have confidence in warning system.

I cannot emphasize enough how vital it will be to mobilize NATO forces as early as possible. A few hours may make all the difference. Nor can I overemphasize our concern that this may not happen as quickly as it must for us to have any chance of limiting a conflict.

To remedy this concern, political decisionmakers in all the member nations must be convinced that our warning system is sound and believable. The U.S. has a well developed and constantly examined indications and warning system, supported by extensive collection and analytical resources.

[Deleted.]

Reaction to Warning

U.S. shares warning intelligence.
Attempt to demonstrate credibility.

We must use that information, along with intelligence we have collected, to make the estimate which we provide to NATO.

In this way, we hope to demonstrate the ability of the indications and warning system to accurately depict the Pact's military reaction to crises, such as the situations in Poland in 1980 and 1981.

Reaction to Warning

U.S. shares warning intelligence.
Attempt to demonstrate credibility.
Expect NATO reluctance to mobilize for war.
Intelligence must be convincing.

Still, while our ability to estimate the Warsaw Pact's military readiness to go to war is ever increasing, it is very likely that we will be [deleted]. Consequently, we envision a reluctance by NATO collectively and the member nations individually to take those steps necessary to prepare for a war.

Any delay in taking those steps could well be fatal to the Alliance. Thus, we think it is crucial that we work constantly to make our intelligence credible and that we share that intelligence within NATO so that it becomes widely accepted.

MAJOR CONCERNS

Readiness and sustainment.
Reaction to warning.
Chemical warfare posture.
Maximizing the conventional defense.

Our third special concern has to do with our ability to deter the Warsaw Pact from employing chemical munitions. Today we rely principally on our conventional and nuclear forces to deter such weapons.

CHEMICAL WARFARE POSTURE

Today—reliance on conventional and nuclear forces to deter.
Credible?

The question that must be asked, however, are whether these forces are adequate to deter chemical attacks and whether reliance on conventional and nuclear capabilities in this instance makes good strategic sense. We believe the answer to both is no.

We can only speculate on whether NATO would breach the nuclear firebreak in response to a chemical attack. Much would depend on the circumstances at the time. However, since chemical attacks would likely lead to a serious degradation of NATO defensive capabilities and a loss of territory, there is a high probability that the alliance would be forced to at least consider the nuclear option.

Now, what about a conventional response? Will that defer the use of chemicals?

CHEMICAL PROTECTIVE EQUIPMENT

Prolonged wear degrades combat effectiveness up to 50 percent.

Tests have shown that prolonged wear of protective equipment can reduce the combat effectiveness of our forces by up to 50 percent. Communications become difficult, mobility is impeded, the ability to use optical equipment is degraded, and the list goes on. So we can argue that if the Warsaw Pact can force NATO into its protective equipment and not have to concern itself with being forced into a similar posture, then they will have fewer inhibitions about using these weapons. History has shown that chemicals have been most effective where the target forces were not able to defend themselves and were not capable of responding in kind.

CHEMICAL WARFARE POSTURE

Need ability to respond in kind.
Defensive.
Retaliatory.

By responding in kind, NATO could force Pact forces to operate in their own protective equipment and in a similar degraded posture or accept casualties. The military advantage of using chemicals is thus removed and the deterrence is effective.

Deterrence is achieved by maintaining credible defensive and retaliatory capabilities. Neither capability is sufficient in itself. Both are necessary elements.

CHEMICAL WARFARE POSTURE

Defensive capabilities inadequate.
Progress in [deleted].
[Deleted] lack essential protective means.

On the defensive side, Allied Command Europe has made progress and our forces are better protected than ever before. However, only the [deleted] has approached the initial ability to survive an attack for [deleted] days. Forces in the [deleted]. The problem is worsened by inadequacies in antidotes and the [deleted].

CHEMICAL WARFARE POSTURE

Defensive capabilities inadequate.
Progress in [deleted].
[Deleted] lack essential protective means.
Retaliatory capability inadequate.
U.S. modernization underway.

Now, what of the current retaliatory situation? The U.S. stockpile is located within the continental United States and in storage areas in the Pacific and West Germany. Those of primary concern to Europe are the munitions stored in Germany. [Deleted.]

This [deleted] leaves us without a [deleted]. All nations are setting force goals to improve their defensive posture, and the United States is taking steps to modernize its stockpile by converting to binary weapons.

CHEMICAL WARFARE POSTURE

Defensive capabilities inadequate.
Progress in [deleted].
[Deleted] lack essential protective means.
Retailatory capability inadequate.
U.S. modernization underway [deleted].

What we need today are [deleted]. However, our most glaring deficiency in this area is the [deleted].

In the longer term, we need [deleted].

MAJOR CONCERNS

Readiness and sustainment.
Reaction to warning.
Chemical warfare posture.
Maximizing the conventional defense.

Our fourth and unquestionably one of our most important concerns has to do with employing our available conventional capabilities in such a way that the nuclear threshold is raised.

MAXIMIZING THE CONVENTIONAL DEFENSE

Raise nuclear threshold.
Buy time for diplomacy.
Requirements: Ready forces, modern weapons, and sustainment.
Maximizing the conventional defense.
U.S. Patriot.

By doing this, we support the diplomatic process and buy time for it to work toward restoring the status quo ante while we hold the enemy on the battlefield. In a sense, this concern encompasses everything we have covered in this briefing. It requires ready forces equipped with modern weapons which can be sustained in combat to frustrate the attack.

FOLLOW-ON FORCES ATTACK [FOFA]

Key component of ACE Warfighting concept of operations.

As I mentioned earlier, a key element of the Allied Command Europe concept for mounting a strong conventional defense is called "follow-on forces attack." It is a means of multiplying our outnumbered defensive forces so that we ultimately reduce the number of forces we must eventually engage.

Follow-on forces attack uses a few modernization programs and the application of emerging technologies to gain the most from existing Alliance forces.

FOLLOW-ON FORCES. ATTACK [FOFA]

Key component of ACE warfighting concept of operations.
Requirements:
Accurate surveillance and target acquisition systems.
Intelligence fusion and C^3.
Long-range, accurate attack systems.
U.S. must take lead.

Under follow-on forces attack, our commanders will employ a combination of direct and indirect attack and standoff weapons systems to delay, disrupt, and destroy the enemy. It requires accurate and survivable surveillance and target acquisition systems, high speed tactical intelligence fusion, command, control, and communications systems, and long range and highly accurate attack systems.

The U.S. must continue to take the lead among the allies in developing the means to fully employ the Allied Command Europe follow-on forces attack sub-concept.

KEY INGREDIENTS

TR-1 reconnaissance system.
Other intelligence capabilities.
TR-1 aircraft.

We have made significant progress in determining what we need to accomplish follow-on forces attack, and have begun fielding the systems necessary to do the job. The TR-1 reconnaissance system, coupled with the intelligence from other theater and national collection systems, is being integrated within our theater intelligence architecture program to provide the means to see and accurately locate the enemy.

KEY INGREDIENTS

TR-1 reconnaissance system.
Other intelligence capabilities.
[Deleted.]
C^3 systems.
Attack systems.

Senator **Levin**. You might as well finish. We are going to have to recess for 10 minutes. You just have a few slides left.

General **Wood**. [Deleted.]

This intelligence will be communicated by a variety of NATO and U.S. communications systems to the combat forces for targeting.

Follow-on Forces Attack [FOFA]

Objective: Reduce the number of troops that would reach our defensive lines.
Soviet 122mm howitzers crossing bridge.

Our assessment is that follow-on forces attack could well be the major determinant in the overall outcome of a conventional war by reducing to manageable proportions the number of enemy troops which would reach our defensive lines.

The challenge is to acquire the necessary means to achieve the full benefits of the concept. With this capability, we believe we can enhance deterrence and raise the nuclear threshold for NATO.

Needs

Continued funding for intelligence collection programs.
Support for weapons systems to attack follow-on forces.

We need continued support for the TR-1 Reconnaissance System and the other elements of our theater intelligence architecture.

We are cooperating with NATO and several of the major intelligence-producing nations to make NATO's [deleted] a reality. We are hoping to invest some of the money recently earmarked by the Congress to engage [deleted] within Allied Command Europe.

Finally, we urgently need your support for the air and land-based weapons systems and forces that will enable us to attack follow-on echelons accurately.

NATO'S CHALLENGE: THE DEFENSE OF EUROPE

In conclusion, today I've given you an overview of NATO's challenge, the defense of Europe, the threat facing NATO, and the problems General Galvin must overcome to deter and, if necessary, to defeat that threat.

I thank you for your attention in this very long briefing, and that concludes the briefing.

Senator **Levin**. Thank you, General. We are going to recess now for 10 minutes.

[Recess.]

Senator **Levin**. General, you ended up with a lot of discussion of chemicals and I want to start there, and maybe work a little more chronologically through your presentation. Given the fact that the chemical munitions are of primary concern to Europe and that we now have chemical weapons stored in Europe, in Germany I believe, should we be unilaterally withdrawing the present chemical weapons stocks that we have there?

General **Wood**. The short answer is no.

Senator **Levin**. Do you know why we are doing that?

General **Wood**. I think that it causes a risk, as I have tried to point out in the briefing, that historically chemical weapons have only been used by a country which perceives that the target country does not have a chemical weapon with which to respond.

And as we pointed out, if we have to don protective equipment and try to fight in that environment, we are at a disadvantage. The fact that we have chemical weapons in Europe and the Soviets or the Warsaw Pact perceive that we have a willingness to use them, that in itself contributes to deterrence.

Senator LEVIN. Do you know why we are pulling them out?

General WOOD. The law that required the destruction of older type munitions and the fact that we had not converted yet to our binary, the newer weapons, is the primary reason.

Senator LEVIN. Does the administration support our pulling out these weapons, do you know?

Forget the administration. Does the DOD or the military support the withdrawal of those weapons?

General WOOD. I am not familiar with the DOD position, but I would think that it would not be to our advantage to pull them out.

Senator LEVIN. Do you know whether the force goals set by any of our allies include peacetime deployment of U.S. binary weapons in their territory?

General WOOD. No, sir, I don't know.

Senator LEVIN. Let me now ask you some questions in slightly some order as it relates to your presentation, although this will not be perfect.

You gave us some examples where the Soviet Union had shortfalls or had some problems, and I would like to ask you about some additional ones as you might see it in the intelligence community.

SOVIET CONSCRIPTION

The Soviet Union as I understand it has universal conscription, with everyone serving for 2 years. What is the impact on them of having a turnover every 2 years, instead of our longer term?

General WOOD. Well, it is a great impact, and if you were to take a look [deleted] you would see that at each semi-annual troop rotation where they are bringing the new conscripts forward, the readiness of the Soviet forces forward deployed goes down.

You can see that [deleted] as they get ready to receive new conscripts and they do some training within the units that they are assigned to. So it does cause them some readiness problems.

Senator LEVIN. Given the political orientation of the Warsaw Pact allies and the uncertainty as to what the Poles or the Hungarians or anyone else might do in a conflict, and given the fact that they are subjugated peoples in Eastern Europe, how secure do you consider the Soviet logistics lines running through Poland, for instance?

General WOOD. Again, the short answer would be [deleted]. We think that in the initial stages of any confrontation the Soviet dominance of the non-Soviet Warsaw Pact nations would be sufficient to accomplish their purposes.

Now as the length of the conflict draws on, there may or may not be some changes in that. [Deleted.]

MINE-LAYING CAPABILITIES

Senator LEVIN. We have had some experience recently with mine-laying capabilities and lack thereof. Do we have any dedicated mine-laying aircraft or ships?

General WOOD. I do not know how to answer that. When you say "dedicated," we certainly have aircraft that can be converted to do that. I am not conversant enough with our own Navy's aircraft to know if they have any that are dedicated to that.

Senator LEVIN. Could you find that out for us, given the fact that the Soviet Union would have to transit through certain choke points to get to the open seas.

General WOOD. But you certainly would lay them with ships, and we have that capability.

Senator LEVIN. Could you tell us exactly what dedicated mine-laying aircraft of ships we have.

General WOOD. Yes, sir.

[The information follows:]

None in the U.S. European Command. While most ordnance-capable aircraft and surface/subsurface ships are also mine-capable, we have no such craft dedicated to this mission within the theater.

WEAKEST LINKS

Senator LEVIN. When you went through the maps there, I take it that, at least as I understood it, the weakest link that we have there was the [deleted].

General WOOD. [Deleted.]

Senator LEVIN. But that was in terms of the likelihood of a rapid breakthrough and a need to rely upon the nuclear weapons. I think throughout the entire European scene that was the weakest link, was it not, that you can identify right now?

General WOOD. Most of the assessments that you see show attacks [deleted].

Senator LEVIN. That was weaker than the [deleted].

General WOOD. Yes, sir. Over time, with the buildup of capabilities, they might see the strategic advantage of going into [deleted] as we have normally thought of as being more to their advantage.

Senator LEVIN. Now, has there been any change in our assessment of our weakest links over the last 5 years?

General WOOD. I am not familiar enough with it that far back to comment, sir.

Senator LEVIN. Do you know whether or not there has been any change over the last 5 years in our assessment of the outcome of attacks in various regions generally, not just in terms of weakest links, but in terms of how many days here and how many days there?

General WOOD. I guess I would like to back up for just a moment and comment on the previous one. When you say the last 5 years——

Senator LEVIN. Five years ago, if we saw this same map, would the charts have been the same?

General WOOD. I do not know the answer to that. But the last national intelligence estimate written on the warning of war in Europe was [deleted].

Now, having said that, to respond more directly to your latest question, as people try to assess the non-Soviet Warsaw Pact forces, as you had asked earlier, the change in assessments has occurred over time. [Deleted.]

There have been some recent assessments, not all of which are nationally approved, that say [deleted]. And so there would be some slight nuances if you looked at it over time. But I think the general thrust of it would be about the same.

Senator LEVIN. Would you provide for the record the most significant changes in this net assessment from 5 years ago, both in terms of the outcome of the Soviet attack in various regions and the sustainability levels of our forces and stocks.

General WOOD. We will provide that for the record.

[The information follows:]

The [deleted] change in the net assessment over the past 5 years has been [deleted].

Despite [deleted] increased efforts by all alliance nations has [deleted].

However, this [deleted] the Warsaw Pact has improved their warfighting capabilities [deleted]. These Warsaw Pact modernization efforts (increased tanks, armored personnel carriers, artillery; improved aircraft and modern naval vessels) have [deleted].

Senator LEVIN. I am going to stop there. Senator Quayle.

Senator QUAYLE. Thank you very much, Mr. Chairman.

Let me just apologize for not being here at the opening.

Senator LEVIN. I did explain, by the way, that we were both in caucuses.

Senator QUAYLE. Just very briefly, I think that you and I are going to confer with staff afterwards about the future hearings.

I look forward to getting into some of these substantive issues. One of the things I enjoy working with you is getting into our strategies, and I think as we look at the net assessment in Europe that this is a very, very important subject. And I congratulate you for getting into it.

And I have some ideas on where we ought to be looking and I think that both you and I, we have come to fairly quick agreement on how we can explore these various issues that we are going to be talking about.

NET ASSESSMENTS

First, I want to get from General Wood, what the connection is between your new assessment office and the net assessment office of Andy Marshall, and also the net assessment in the JCS. Are these net assessments similar?

Do you have more people working on net assessment on a day-today basis?

How does your particular group in the European Command fit into this net assessment equation?

General WOOD. Our staff is very small, and based upon my own experience in this arena, I would think Andy Marshall's staff is probably the premier net assessment staff. And certainly we try to use the material that is provided from their work to incorporate into the work that we do.

They of course take on global issues. We concentrate on our particular theater of operations, but we use their documents a great deal as the basis for what we do.

Senator **Quayle**. So there is communication and coordination with the net assessment that you and your small staff put together in the European Command with what, say, Andy Marshall and the net assessment office in OSD and I presume also the net assessment of the JCS. How many people work net assessment issues in the JCS?

General **Wood**. Well, I just do not know the number to tell you that.

Senator **Quayle**. Do you coordinate more with Andy Marshall's office than you do with the JCS?

General **Wood**. I have to beg a little bit of ignorance there, because I am the J-2. Net assessments is done by the J-5, and I personally do not deal with them on a day to day basis. So I would have to get that information for you.

Senator **Quayle**. You do not deal with the JCS?

General **Wood**. I do not deal in net assessments. The J-5 deals with net assessments. I am the red input to the net assessment, and the J-5 on our staff takes my input and puts it together with the blue input that he gets from the J-3, who is the operator.

Senator **Quayle**. So you do not even, on a day-to-day basis, have communication with Andy Marshall's outfit?

General **Wood**. I, the J-2, do not. USEUCOM does, through the J-5.

Senator **Quayle**. Was this briefing a net assessment briefing?

General **Wood**. It is billed as a net assessment. We start with the threat, build in the blue capability, and give you some conclusions. It is a net assessment briefing.

Senator **Quayle**. But you, specifically you, do not—you are not in charge of net assessment, but you are not—you are the J-2, you are not the J-5.

General **Wood**. To avoid having two people come before you——

Senator **Quayle**. I am not saying this in any derogatory manner. I am just trying to get an understanding of what this is, so that we will know what kind of testimony we are getting.

General **Wood**. I am only trying to explain why I do not know the numbers on the JCS staff, because I do not deal with them on a day-to-day basis.

Senator **Quayle**. You do not deal with Andy Marshall's office either on a day-to-day basis?

General **Wood**. That is correct.

Senator **Quayle**. Who does?

General **Wood**. The J-5.

Senator **Levin**. Can I interrupt? Who is the J-5?

General **Wood**. Air Force Maj. Gen. Gordon Williams.

Senator **Levin**. What is the J-5?

General **Wood**. Plans and policy.

Senator **Levin**. J-2 is the intelligence?

General **Wood**. Yes.

Senator **Levin**. So you are the intelligence operation for Galvin?

General **Wood**. Correct. I worry about the red forces. And the net assessment, of course, by definition includes the red and the blue, and rather than have two people come before you, I drew the straw.

Senator **Quayle**. Would we get a different picture—and you may be the wrong one to ask. Would we get a different picture on net assessment from the JCS or from Andy Marshall's shop?

General **Wood**. I do not believe you would get a different assessment at all. We do not do this in a vacuum. Our action officers are in Washington dealing with their counterparts frequently, and it would serve no purpose for us to do it in a vacuum.

Senator **Quayle**. I think one of the things we should schedule is to have further hearings on net assessment, although I am wondering, just in your judgment, do you think you presently have a good net assessment, in the public domain. Do you think that is possible?

General **Wood**. Even though at the current moment I am J-2 at USEUCOM and net assessment is not the J-2's function, I have dealt with net assessments in my career and will give you my biased opinion.

This is a very, very difficult thing to do, because we have near-perfect information on the blue forces and we never know how perfect or imperfect the information is on the red forces. And so it is, I think, misleading to put an inordinate amount of credibility into net assessment. You have got to have one. It serves a useful purpose, but they are very, very difficult to provide.

Senator **Quayle**. In other words, to talk about this publicly and in the open you are saying would be a rather tricky thing?

General **Wood**. I think it would be misleading, because of the fact you do know the blue forces, you can talk with credibility there. We hope we know the red forces, but we are never sure.

Senator **Quayle**. Do you have a price tag on what you have handed us today on just getting up to where you think that we ought to? I mean, you talk about certain specifics. I do not know if anybody just happens to have a ballpark figure, you know, getting sustainability up, getting readiness up, getting the specific weapons systems that you talked about.

Does anybody have—how about the J-5? Would he have a ballpark figure of what this might cost?

General **Wood**. I think any of us could come up with a ballpark figure, given enough research. I do not have it.

Senator **Quayle**. I do not want to task a lot of work or anything, but I would just be curious of what, the presentation that you made here today, to walk through that and just see what it will cost.

I mean, I think it is very important, because as we focus more on conventional capabilities—and believe me, I think there is a lot of military and political usefulness in conventional capabilities and enhancement. But as we start looking at this attractiveness, I think that it would be helpful if we would have some sort of a price tag. Now, it may be outrageous, that is for us to make some of these judgments.

I am going to guess it is going to be rather high, just going through here. But I wonder if you might just go back and try to give us just a figure, and not now, but in time to try to present to the committee, a figure of what you think it might be to go along with getting up to what you think we should be.

General WOOD. I do not have them put together, but I have some figures that have to do with the fiscal year 1988-1989 budget and what we think we need for O&M, for people programs, for readiness and sustainability budgets, and for the services. It would be a matter of putting those together.

Senator QUAYLE. I would just be curious. In this presentation, and looking at the red and blue, to see what you think we would need as a minimum, because I think you are talking about—like on the [deleted] days and [deleted] percent, I saw that one chart in there on how much it fell below. Well, obviously we would have to get those figures up to at least the minimum of [deleted] percent or [deleted] days.

There is a figure that you can plug in there, and I just would be curious for that, and if you could give it to us for what it would be in fiscal years 1988 and 1989, I would certainly appreciate it.

General WOOD. Yes, sir, we will do that.

[The information follows:]

Headquarters, U.S. European Command does not have direct access to service costing data for the shortfall items. However, approximately [deleted] would be required over the [deleted] to reach [deleted] in all categories of theater war reserve stocks. The cost to bring war reserve stockage to Headquarters, U.S. European Command levels is estimated at [deleted]. These figures include only U.S. requirements for ammunition, materiel, spare parts, medical supplies, petroleum, and rations in the European theater. Other factors besides theater reserve stocks can equally affect our sustainability and thus our war fighting capability. Some of these and rough estimates of costs are provided below.

Equipment costs to fill POMCUS are estimated at about [deleted] and warehouse construction costs (which will be ultimately paid for under NATO infrastructure funding) are estimated at about $156 million.

Phase I of the Army's Combat to Support Ratio (CSURS) study indicates that the cost to fix the [deleted].

The cost of strategic lift shortfall cannot be estimated in dollars. The airlift shortfall is estimated at about [deleted] short tons which is the equivalent of [deleted] additional C-5 and [deleted] C-141 aircraft. The sealift shortfall is about [deleted] short tons, equivalent to [deleted] additional fast sealift ships.

All of these figures are only estimates, based on a variety of data sources, since this headquarters does not have direct access to service cost data.

INF

Senator QUAYLE. I was interested, and if you could give me some comments on, particularly looking post-INF—and I do not want to get looking too far down the road, but just INF. And you talked about hitting some targets [deleted] and I think a couple of Senators I heard coming in and out bring this up, on the military usefulness of some long-range conventional cruise missiles.

I think that there was some casual discussion in here, but if you are looking at some—the whole concept of hitting some very important military targets [deleted] the military usefulness of conventional, long-range conventional cruise missiles en route navigation, adverse weather capabilities and with a high degree of accuracy, say even eventually getting down to zero CEP, which I think with the technology in the future that we could do that.

I wonder how you would put that into some sort of a priority from your intelligence background.

General Wood. What I want as a targeteer is a very accurate weapon that will have a range of different warheads that can take into consideration the hardness of the target. If you want to give me a weapon with a zero CEP, then I will say for most targets that conventional is good enough.

If you want me to dig out a hardened bunker with a conventional weapon, I would say that I've got a really difficult job.

Senator Quayle. How about bridges, railroads, softer targets? And soft targets are important. I do not think we want to underestimate the importance of really getting at some of the softer targets, not maybe some of the command centers that are very deep and very hardened and some of the other ones that are very hard.

But I am talking about [deleted] the application of the long range cruise missile with the high degree of accuracy, the military usefulness and importance that you might judge.

General Wood. The short answer is that it is very useful. If the CEP is sufficient to target and the target is soft enough and the yield is sufficient, I have no reason to want anything different.

Senator Quayle. I have a couple of more questions. I do not know. How do you want to do this on time?

Senator Levin. If you just have a few more, you might as well continue.

DETERRENTS TO THE SOVIET UNION

Senator Quayle. Let me ask you a question. In your mind, what is it that really deters them, the Soviet Union? Is it simply, as you stressed in your testimony, that, you know, if we had [deleted] more days of sustainability that [deleted] we would be more in the area of readiness?

Is that what deters the Soviet Union? Or should we be looking at other things, of what, you know, how we might be able to really, you know, not just stop them, but how we might be able to, if they started something, win it?

I mean, in your mind—and you are sitting there thinking as a military planner, with all of the information you have. What do you think really deters the Soviet Union from a military point of view?

And let us not get into the political aspects. Let me just ask about the military questions.

General Wood. A weapon that threatens the Soviet homeland and one that they cannot defend against, and the perception that our Government has the willingness and capability to use it.

Senator Quayle. And what kind of weapons system would fall into that category?

General Wood. You can name it. [Deleted.] If you want to take away the ground weapons, for instance, in a zero-zero option, it could be [deleted].

I think that they are deterred if they think their homeland is threatened and they do not have a defense against it. SDI scares them for that reason.

Senator Quayle. Would this be strategic or tactical?

General Wood. Strategic or tactical.

Senator Quayle. In nuclear and non-nuclear?

General **Wood**. My bias is that they are more afraid of nuclear. If you pressed me and you give me that zero CEP and long range, then I will have to admit conventional is an equal threat.

EXPLOITING SOVIET WEAKNESSES

Senator **Quayle**. Let me ask one final question. The idea—and I hope this is part of some of the things we might be able to explore. The idea of and the theory of competitive strategies, in other words that we ought to be focusing on weapons systems, strategies, ideas, that go to not only our strengths, but more importantly perhaps the Soviet Union's weaknesses.

Could you give me two or three weaknesses that you see in the Soviet Union that we ought to exploit to our military advantages?

General **Wood**. Well, I think their first weakness has to be [deleted].

Senator **Quayle**. What do we do to exploit that from a military point of view? I mean, they do not have it and they are trying to catch up. But what would we do militarily in operations that would exploit that weakness?

General **Wood**. [Deleted.]

Senator **Quayle**. Do you have another weakness?

General **Wood**. The other weakness is the [deleted]. We have many indications that when [deleted]. So I think that, even though that is a low priced commodity and it is not a high technological component of their military, it is certainly a weakness.

Senator **Quayle**. How would we exploit that from a military point of view? What I am trying to do is to think in terms of military strategies, military systems that we ought to be prioritizing, things that we ought to be doing on a military basis as the Defense Armed Services Committee looking at it? How do we go about exploiting that perceived weakness?

General **Wood**. I honestly cannot answer that one. That is a tough one. [Deleted] but I do not have a good answer for that.

Senator **Quayle**. Do you see my point?

General **Wood**. [Deleted.] I do not have a good answer for that.

Senator **Quayle**. Fair enough.

Thank you, Mr. Chairman.

Senator **Levin**. Thank you, Senator Quayle.

You, in answer to Senator Quayle's questions, indicated that it would be misleading to make net assessment efforts public, because we know a heck of a lot about the blue and we are not sure what we know about the red.

Is that not true also about private executive session efforts? We still know a hell of a lot about the blue and not much about the red?

General **Wood**. I really was not keying on the public so much as I was the net assessment idea. If I wanted to key on the public, I would say we certainly would not want the red side to know that we did not know something or expose the things that we know.

COST OF IMPROVING OUR SUSTAINABILITY

Senator LEVIN. Now, on the cost of repairing or improving our sustainability, we got a figure of a couple of months ago of $2 billion for each day's sustainability. Does that make any sense to you?

Does that strike any chords or bells with you?

General WOOD. It is a number that was given to you. I could not go back and reconstruct it for you, about half that is manpower.

Senator LEVIN. Do you know if that is just—and that is a U.S. figure, I take it?

General WOOD. Yes, sir.

Senator LEVIN. That means we could buy all the sustainability we needed from just [deleted].

Senator QUAYLE. Well, [deleted].

SOVIET WEAPONS SYSTEMS

Senator LEVIN. On one of your slides, you indicated the Soviet Union has the ability to build weapons as good as we do or superior to ours. And you have indicated that some of their weapons are better.

Could you give us a list for the record of which Soviet weapons systems are better than ours qualitatively, the main systems? Just for the record, provide that for the record.

General WOOD. [Deleted.]

Senator LEVIN. I was asking if you could supply that later, just later on for the record, so you can give us a more complete list.

General WOOD. Sure.

[The information follows:]

SOVIET WARSAW PACT WEAPONS

The following is a representative list of Soviet/Warsaw Pact weapons that are considered better than their U.S. counterparts:

Soviet weapon—[Deleted.]
U.S. weapon—[Deleted.]
Reason—[Deleted.]

NOTE.—Not only does the Soviet/Warsaw Pact have a large variety of weapons, many without a U.S. counterpart, they also have large numbers of these weapons. Secondly, through incremental upgrades of existing weapons systems, they are able to have relatively current existing systems alongside modern generation systems thus enhancing their warfighting capability.

Senator LEVIN. Another one of your slides indicated that you believed that [deleted].

Basically, unless their own homeland is threatened. You are saying that the other countries in the Pact are [deleted]. Now, if that is your assessment, how does that coincide with plans for follow-on forces attack?

In other words, are we not attacking the homelands of the various forces that we think are [deleted]. Is there a risk in that?

General WOOD. There is a risk. [Deleted.]

FOFA ATTACK

Senator LEVIN. As I understand it, FOFA is an attack on Czechoslovakia, not on NATO.

General WOOD. No, sir, it is an attack on the Soviet follow-on forces as they move toward the battlefields.

Senator **Levin**. In Czechoslovakia or East Germany, not on NATO territory.

General **Wood**. [Deleted] not in NATO.

Senator **Levin**. Not in NATO.

General **Wood**. Not in NATO.

Senator **Levin**. To the extent that it is an attack on Soviet forces in Czechoslovakia or Eastern Europe or East Germany, does that not risk [deleted]. That is my question.

General **Wood**. The short answer is that it does increase the risk.

Senator **Levin**. I am not saying that we should not do it.

General **Wood**. I do not know how much that is.

Senator **Levin**. You have showed us a map of the northern region and you showed us how long [deleted] could last and so forth. Did that assessment assume that [deleted].

General **Wood**. Yes, sir.

Senator **Levin**. And it also assumed that the Soviets did not attack through [deleted].

General **Wood**. Yes, that the Soviets did not violate [deleted].

Senator **Levin**. Would you give us a list for the record—well, let me go back. On slide 28A you say the following: "Because of our limited sustainability, we estimate our defense would hold for about [deleted] days before Pact forces could seize their initial objectives."

This was referring to our weakest link, is that correct?

General **Wood**. No, sir. At this point that was referring to [deleted].

Senator **Levin**. That was identified as the [deleted] portion?

General **Wood**. No, sir.

Senator **Levin**. Why you say "our limited sustainability," are you then referring to NATO?

General **Wood**. To NATO.

Senator **Levin**. And on the next few pages, you also talk about limits in sustainability, and at some times you seem to be referring to NATO's shortfalls and at some times to our shortfalls in sustainability.

But the bottom line is that you gave us the figure earlier today of something like [deleted] days of sustainability that was ours. But when you are talking about [deleted] days, you are talking about some of our NATO allies?

General **Wood**. I think that I misspoke earlier. When we looked into the background data that we brought, we are talking about [deleted] days of ammunition in NATO, in the blue forces fighting the red.

Senator **Levin**. Now, what is the [deleted] days figure?

General **Wood**. That is how long you could hold your position. And really, I believe that it is difficult to try to draw a relationship between the [deleted] days of ammunition and the [deleted] days of holding the position.

Senator **Levin**. Excuse me. We have got [deleted] days of ammunition. How could we say that, because of limited sustainability, our defense could only last for [deleted] days?

General **Wood**. You have got fuel, food, and transportation, and there are other variables.

Senator **Levin**. Now, where is the weakest link?

General WOOD. I think we said we would have to find that for you. I do not have that answer. That was the same question that you asked earlier. I do not know the answer to that.

Senator LEVIN. All right. If you could give us a list then and the component parts of sustainability.

General WOOD. Yes, sir.

Senator LEVIN. Where we have it and how long, and how much sustainability. We would appreciate that, and you would include the NATO allies.

General WOOD. We will break it out, whether we are talking NATO or United States.

Senator LEVIN. Your figure for NATO ammunitions surprised me.

General WOOD. We will break it out for you.

Senator LEVIN. We will wait, then, to hear from you on that.

When you compared division on slide 29, are those divisions equalized or are those a different number of men? They have [deleted] in Central Europe and we—they have [deleted] divisions.

General WOOD. They are not equalized.

Senator LEVIN. And so you are comparing one kind of apple with another kind of apple?

General WOOD. Yes, sir.

Senator LEVIN. Do you not think this would be a more accurate assessment if we equalized them?

General WOOD. Yes, sir, we could also show that.

Senator LEVIN. Would you do that for the record?

[The information follows:]

The information requested is not available at Headquarters, U.S. European Command. [Deleted.]

General WOOD. Again, I would just like to add that [deleted]. But it is certainly no worse than you point out here.

U.S. FORCES IN NORTHERN ARMY GROUP

Senator LEVIN. Do we have significant U.S. forces permanently stationed in the north German plain?

General WOOD. Yes.

Senator LEVIN. I am sorry, in the Northern Army Group portion.

General WOOD. One brigade. In peacetime, Northag is mostly, though, British and German forces. One U.S. Brigade is stationed north of Bremen.

Senator LEVIN. One U.S. brigade in that area?

General WOOD. Yes.

Senator LEVIN. [Deleted.]

General WOOD. [Deleted.]

Senator LEVIN. Have we thought of moving some of our forces [deleted].

General WOOD. [Deleted.]

Senator LEVIN. But have we looked at this?

General WOOD. In peacetime we have not thought about that at the moment.

Senator LEVIN. Any reason why not?

General WOOD. All the U.S. support activities are in the southern half of West Germany, and there are no support activities for it.

Senator **Levin**. Well, have we asked some of our allies to either provide the support activities or have we thought about moving some of our support activities?

General **Wood**. We will look into that, sir.

Senator **Levin**. The sustainability figure on slide 32A is as follows—here again, you say: "Sustainability will determine the length of battle. After [deleted] days in place, stocks of key munitions, such as [deleted] will be exhausted."

Is that again NATO? That is not our munitions; that is the NATO allies? Or is that a U.S. figure?

General **Wood**. It is United States, and we are talking there [deleted].

Senator Levin. And you have got slide 33C, you talk about: "We assess NATO's forces will frustrate a land drive through the straits [deleted].

Is that ours?

General **Wood**. No, sir. It is a NATO assessment. And there we are talking about [deleted].

Senator **Levin**. That is it?

General **Wood**. There is more. Everything from [deleted]. We are down in some cases to [deleted] percent.

Senator **Levin**. Could you supply that whole list for the record?

General **Wood**. Yes, sir.

[The information follows:]

Within the U.S. European Command, the items listed below have been evaluated as the critical items which will determine, from a sustainability viewpoint, how long U.S. forces will be able to hold the line. For each item, called a "Warstopper", the U.S. stocks on hand are shown in either days of supply (DOS) or percent fill of requirement (in theater reserves).

Current War Stoppers

USAREUR and on hand DOS or percent fill.—[Deleted.]

USNAVEUR and percent fill.—[Deleted.]

USAFE and percent fill.—[Deleted.]

Note.—In some cases days of supply (DOS) are shown to have a range of days. This results from the inability to roll different subcategories for a listed war stopper. [Deleted.]

Senator **Levin**. Would you give us General Galvin's statement in full for the record, if you did not read it to us? If you did not read the entire statement into the record, would you provide it to us?

General **Wood**. I will provide the statement, yes, sir.

[The information follows:]

Here is my conclusion: if the negotiations at Geneva result in agreement on the "zero-zero" option—the global elimination of all U.S. and Soviet land-based longer-range (LRINF) and shorter-range (SRINF) intermediate nuclear missiles—NATO's strategy of flexible response will still be valid; however, the means to implement NATO strategy will require buttressing. Otherwise, there will be a higher risk than we in the West should accept.

Buttressing will be necessary because to sustain credible deterrence, NATO must maintain an appropriate mix of adequate and effective nuclear and conventional forces. Each component is indispendable. Therefore, as we look at current and future efforts to reduce nuclear weapons in Europe, we should not forget that an essential element of NATO's continuing ability to deter Warsaw Pact aggression and intimidation is the presence of missiles, aircraft, and artillery that can deliver nuclear warheads. We should also not forget the importance of these weapons systems being spread across the various NATO countries so that any nuclear response would be clearly seen as a "total NATO" response.

If we take these steps—if we properly buttress NATO's military forces—I am convinced that NATO can deter war in the future as well as it has for the last 38 years. On that basis I support the conclusions of the NATO ministers at their June meeting in Iceland, and I support the current negotiations at Geneva to eliminate U.S. and Soviet LRINF and SRINF.

(Above was extract of remarks by General Galvin (USCINCEUR/SACEUR) to the Centre for European Policy Studies, Brussels, Belgium, given on 30 July 1987.)

Senator LEVIN. Are you familiar with the I square, S square net assessment?

General WOOD. No, sir.

Senator LEVIN. How would your net assessment differ from, say, the German net assessment if they were sitting right here and looked at all of your slides? And we said: Okay, now, you are our ally, you have done net assessments; in what significant ways do you differ in your net assessment? What would their answer be?

General WOOD. I do not know that. If I could amplify, though, I could say that we work very closely with the allied command, CENTAG, which is composed of United States and German corps commanded by a United States four star, who works for a German four star.

And the assessments that they make of the Soviet-Warsaw Pact enemy is incorporated into those assessments that we use in Europe. And so my feeling is that they would not be that different. But I have not seen a German assessment.

Senator LEVIN. Just for the benefit of Senator Quayle, we asked the Germans to make a presentation to us in some war gaming, which is a little different than net assessment. There were some interesting differences.

This is the Federal Armed Forces war gaming concept, a briefing. I didn't know we had this. But anyway, it might be interesting to share this with you.

Senator QUAYLE. Are you saying that there are some significant differences? If we had some ambitious staff member that went through and did the two and they would say, well, here are the differences between the two?

Senator LEVIN. There are significant differences in terms of what would happen in various sectors and in warning time, but also in other areas, too.

Senator QUAYLE. You know, I would find that of great interest, if we might be able to go through and present it just to the subcommittee.

Senator LEVIN. We did it in my office one day about 2 months ago. What I am going to do is to try to get it done for the subcommittee, to see whether or not it might be interesting to all of us.

I would be interested in this and I think the subcommittee might be, but I wanted to check. They had not completed it actually at that time. They were still in the process. But even their incomplete war gaming that they provided showed some significant differences, and I would urge you to ask the Germans to look at this.

I think it would be fascinating. They ought to look at it and critique it from their point of view, and then you ought to look at theirs if you can. And not just the Germans, but ask our other allies.

General WOOD. The difficulty, which I am sure you are aware, is that we have to deal with what the U.S. assessment of the Warsaw

Pact is versus what the NATO agreed assessment is, and they are not always the same because of the difference in collection of intelligence and the evaluation of that intelligence, using all source data.

It is a recognized advantage, I think, in NATO that the U.S. intelligence collection network is the largest and the most productive, and therefore you can come up with some different conclusions.

SHARING INTELLIGENCE WITH ALLIES

Senator LEVIN. I think even you said we ought to be sharing our intelligence with our allies and vice versa. I think you said that in one of your slides we should constantly make our intelligence credible and share that intelligence within NATO.

[Deleted.]

General WOOD. That is this briefing.

Senator LEVIN. I know. I am kind of poking a little fun. [Deleted.]

But I think that you would find it helpful, at least I would, to get this assessment from them about the war games.

General WOOD. It is bound to be useful. I would just like to assure you that I spend 75 percent of my time trying to get intelligence to the allies. I spend more time trying to figure out how to do that than I do substantive intelligence.

Senator LEVIN. How to get it to them?

General WOOD. How to get it to them.

Senator LEVIN. How about getting it from them also?

General WOOD. We are working on that, but the difficulty is communications.

Senator LEVIN. We are going to do this on a subcommittee basis, but I think you ought to request your counterpart to make that war gaming presentation to you. If they are going to make it to me, they are going to make it to you.

General WOOD. Yes, sir, I will do that.

Senator LEVIN. Why is it so hard to get this accomplished?

General WOOD. [Deleted.] I have made a proposal recently that I thought—and I am the new guy and so I do not have to live with some of the things that they have already gone over and say you cannot do it.

And I went to AFCENT, the Central Region command there, and I proposed to the British brigadier that I give him U.S. NATO-releasable data and he could take it and do what he wanted with it. And he said: You mean that I can put it in a multinational data base? And I said: Absolutely; as far as I am concerned, it is yours. He said: Nobody ever told me I could do that before. The Germans said that they had theirs and they would let me see it. The U.S. had theirs and they will let me see it. But nobody ever said I could put it in my own data base and use it.

I found that to be astounding, because I thought it was such a simple thing to do. But it is not that easy. But we are going to try it.

REQUEST FOR GERMAN WAR GAMING

Senator LEVIN. Well, if you would, make a formal request, would you, for the war gaming? I am sure the Germans would show you their information. If they will show it to a civilian, I think the German military would be happy to share it with our military.

Just a couple of more questions. And again, Senator Quayle, you can interrupt me.

Senator QUAYLE. I just have one final question to ask.

Senator LEVIN. I am just going to ask two or three more questions.

WARNING TIME IN NATO'S DEFENSE

You mentioned, General, the importance of warning time in NATO's defense, and that we must be able to act quickly. Have the Soviets ever conducted the kind of conventional mobilization that you believe is necessary to prepare themselves for an attack on Europe?

General WOOD. My imperfect knowledge would tell me no. They certainly have mobilized to a high degree for their invasions of Poland and Czechoslovakia. Certainly we saw that kind of thing happening as they went into Afghanistan.

[Deleted.] But my knowledge is not good enough to say that they have done it toward Europe.

Senator LEVIN. If you could check that out for the record for us. And if it is different from what you just testified, let us know, would you.

General WOOD. Yes, sir.

[The information follows:]

[Deleted.] However, there are two points to consider.

[Deleted.]

Senator LEVIN. Did your estimates of how successful Soviet offenses would be assume the use of chemical weapons?

General WOOD. No, it does not.

Senator LEVIN. It assumes the Soviets would use chemical weapons?

General WOOD. No, sir.

Senator LEVIN. And how would the estimates be affected if chemicals were assumed to be used? Would you provide that for the record?

General WOOD. Yes, sir.

[The information follows:]

Current studies indicate that the use of chemical munitions by the Warsaw Pact could reduce [deleted] the period during which a cohesive defense of NATO could be sustained.

Senator LEVIN. I am going to keep the record open for questions of any members of the subcommittee.

Senator Quayle.

FOLLOW-ON LANCE

Senator QUAYLE. I just have one final question. General Rogers has come up here year after year and talked about the importance and high priority placed on follow-on LANCE, particularly having follow-on capable LANCE. What priority would you attach to that in your assessement?

General Wood. We place it very high in our required measures if you reach some sort of an agreement.

Senator Quayle. If you reach some sort of an agreement?

General Wood. If you reach some sort of a zero-zero option.

Senator Quayle. I think perhaps it takes on a greater significance if we reach zero-zero. But General Rogers was always talking about that. As a matter of fact, he always had it as one of his top, in fact it might have been the top priority, was to get a follow-on dual capable system to LANCE.

And I am just curious about how important you think that is, whether you concur.

General Wood. Yes, I concur. That is again the easiest way to answer it. But the reason is that we see it as a very long lead time weapon, and therefore you have to affix a high enough priority to get it under way in time to get it in the theater when it is meaningful.

Senator Quayle. And to get it in the theater, what kind of time frame do you think it absolutely imperative to have it? Do you have a figure?

General Wood. Well, the [deleted] is what we are showing here. But we are looking at certainly no later than [deleted] capability.

Senator Quayle. Thank you, Mr. Chairman.

Senator Levin. Just one more question. You have indicated that warning time hours could make a difference in the outcome. Do we have a pretty good idea of the general approaches the Warsaw Pact forces would take to enter Western Europe?

General Wood. Yes, sir, I think we do.

Senator Levin. And how much are we doing to prepare the terrain to channel forces?

General Wood. The terrain does a pretty good job of that.

Senator Levin. Are we doing much to channel the terrain?

General Wood. Well, if you are speaking of the barrier planning——

Senator Levin. You knew I would get to that, did you not? You have been well briefed.

I was really just talking about channeling the terrain, but we could talk about barriers, too.

General Wood. In the Central Region we have [deleted] preplanned barriers, of which over [deleted].

Senator Levin. Are those available in Europe?

General Wood. The U.S. corps would require [deleted].

Senator Levin. How many?

General Wood. [Deleted].

Senator Levin. [Deleted].

General Wood. In the Northern and Southern Regions, there are some [deleted] and some [deleted] in the north, [deleted] in the southern, [deleted] barriers.

Senator Levin. [Deleted].

General Wood. [Deleted].

Senator Levin. Have we recommended putting in some different kinds of barriers that would be there, like either ditches or——

General **Wood**. New initiatives are being considered that involve, as you suspected I am sure, the use of terrain enhancement and pre-emplacement of pipes for tank ditches.

Senator **Levin**. Where is that initiative right now? Where in the pipeline is the pipeline?

General **Wood**. I do not think there is anything concrete we can point to on that.

Senator **Levin**. In other words, there is a new initiative going on, but we cannot say what part of the process it is in?

General **Wood**. I cannot say that.

Senator **Levin**. Could you let us know where that initiative is?

General **Wood**. Yes, sir.

[The information follows:]

[Deleted.]

Senator **Levin**. Thank you very much, General. We appreciate this, and there will be some additional questions for the record.

Thank you again.

The subcommittee stands adjourned.

[Whereupon, at 4:45 p.m., the subcommittee was adjourned.]

ALLIANCE AND DEFENSE CAPABILITIES IN EUROPE

WEDNESDAY, OCTOBER 7, 1987

U.S. SENATE,
SUBCOMMITTEE ON CONVENTIONAL FORCES
AND ALLIANCE DEFENSE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

ARMAMENTS COOPERATION WITHIN THE NATO ALLIANCE

The subcommittee met in open session, pursuant to notice, at 9:42 a.m., in room SR-222, Dirksen Senate Office Building, Senator Carl Levin (chairman), presiding.

Present: Senators Levin, Dixon, Wirth, Shelby, Warner, Thurmond, Cohen, and Quayle.

Staff present: Arnold L. Punaro, staff director; Carl M. Smith, staff director for the minority; Romie L. Brownlee, deputy staff director; Gerald K. Bankus, Richard D. Finn, Jr., Judith A. Freedman, George K. Johnson, Jr., and T. Kirk McConnell, professional staff members; Richelle M. Turner, staff assistant.

Also present: Greg Weaver, assistant to Senator Levin; William J. Lynn, assistant to Senator Kennedy; Charles C. Smith, assistant to Senator Dixon; Milton D. Beach, assistant to Senator Glenn; Terrence Lynch, assistant to Senator Shelby; Scott Bunton, assistant to Senator Wirth; William J. Wight, assistant to Senator Warner; James M. Bodner, assistant to Senator Cohen; Henry D. Sokolski, assistant to Senator Quayle; Mark J. Albrecht, assistant to Senator Wilson; Alan Ptak, assistant to Senator Gramm.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Senator LEVIN. Good morning, everybody.

The Conventional Forces and Alliance Defense Subcommittee convenes today to continue its series of hearings on NATO's conventional defense.

In early August, the subcommittee heard testimony on the military balance in Europe from the Director of Intelligence for the U.S. European Command.

This morning, we will focus on armaments cooperation within the NATO alliance.

For each year of the last two decades, the NATO allies have spent more for their defense than members of the Warsaw Pact. Nonetheless, over that period of time, the Warsaw Pact has outproduced NATO on most pieces of military hardware.

At the same time, the Warsaw Pact has also dramatically reduced its qualitative inferiority and in some cases has become superior to NATO.

The result of these troubling trends in both quality and quantity are conventional deficiencies in NATO's military forces.

Although some of these deficiencies can be attributed to the growth in Soviet capabilities, NATO itself must bear much of the blame. Major weapons produced by the individual allies, including the United States, are usually too expensive to be bought in sufficient quantities.

One important cause of their high cost is the allies' failure to achieve real economies of scale in their research, development, and production.

Too many NATO allies are producing similar items. This costs all of us in conventional capability.

You would think that a threat, which has caused us to arm ourselves with nuclear weapons, whose use would threaten the planet, a threat we take seriously would be sufficient to convince the NATO allies to produce only one antitank weapon instead of 11, and to procure a single, interoperable communications system.

The NATO allies must pool more of their resources in markets in order to lower their defense costs. Fortunately, that realization seems to be growing within the NATO alliance.

Much of the credit for this recent progress should be given to the chairman of the Armed Services Committee, Senator Nunn, to Senator Quayle, the ranking member of the subcommittee, and Senators Warner and Cohen who have also been extremely active in this effort to increase interoperability among the allies.

In addition, I would like to recognize the role of our three witnesses this morning. First, Deputy Secretary of Defense Taft has taken the lead within the Department of Defense in promoting armaments cooperation with the NATO allies.

Second, the former U.S. Ambassador to NATO, David Abshire, is well known for his hard work and success in developing a rational resources strategy for the Alliance.

Third, Mr. Tom Callaghan has earned a distinguished reputation for clearly and persuasively explaining the structural disarmament that has weakened NATO.

We appreciate all of our witnesses taking the time to appear before this subcommittee today.

Secretary Taft will testify first, and then Ambassador Abshire and Mr. Callaghan will follow him as a two person panel.

Before we invite Secretary Taft to present his opening statement, I would like to ask Senator Warner and Senator Cohen if they have opening statements.

[The opening statement of Senator Dixon follows:]

PREPARED STATEMENT BY SENATOR ALAN J. DIXON

Mr. Chairman, today's hearing is on NATO armaments cooperation with the United States.

The Armed Services Committee during the consideration of the 1986 Defense Authorization Act established the Nunn-NATO Cooperative Research and Development Initiative which is designed to encourage research and development in NATO's most serious conventional deficiencies. The Nunn amendment also required more side-by-side testing of allied and U.S. weapon systems such as antitank missiles, torpedoes and mobile air defense systems.

Mr. Chairman, I supported this program because of my great concern for NATO's over reliance on nuclear weapons and their failure to produce conventional military hardware in large quantities. We are funding 40–45 percent of the total cost of these cooperative programs, yet as we have heard in previous hearings, if we were forced into a conventional war in Europe, NATO would not be able to fight for more than 2 weeks. They want to develop great weapon systems, but are failing to provide the ammunition necessary to operate them.

My other concern is that in our rush to help our allies develop and procure better conventional weapon systems we may be damaging our own defense industrial base. The memoranda of understanding (MOU's) between the Defense Department and our NATO allies seems to be a one way street. I have not seen our NATO allies seeking out companies in the United States to help them in developing new weapon systems. I think that if we are going to fund 40 to 45 percent of allied weapons projects then we should require that a majority of these funds be spent with U.S. companies.

Thank you, Mr. Chairman.

Senator **WARNER**. Thank you, Mr. Chairman. I join you in welcoming our witnesses, particularly our former U.S. Ambassador to NATO, Ambassador Abshire. We have known him for many years. He is no stranger to this hearing room.

He and the other witnesses join today at a particularly critical time because, gentlemen, you are laying the foundation for what I predict will be a very intense debate in the U.S. Senate when this body provides the advice and consent in connection with the INF Treaty. We all hope this will shortly be forwarded to the Senate as a part of the ratification process.

The imbalance of the conventional forces between NATO and the Warsaw Pact will be a key element in consideration of that treaty. Our testimony today lays that foundation for that debate and also hopefully points in the direction as to how we can remedy this imbalance.

Senator **LEVIN**. Thank you.

Senator Cohen.

Senator **COHEN**. I have no statement. Thank you.

Senator **LEVIN**. Our ranking member, Senator Quayle, has been very, very active in this area. Do you have an opening statement, Senator?

Senator **QUAYLE**. I have nothing to add, Mr. Chairman, except that I want to congratulate you on getting us into this area.

As my colleague, Senator Warner pointed out, and as I presume you did, too, in your opening statement, this is an area that is going to receive a great deal of attention as we look to the post-INF environment.

One of the things that I am interested in, and I think this hearing will specifically move toward it, is what kind of cooperative arrangements can we have with NATO that will increase our efficiency in procurement, the utilization, and the execution of our buying strategies?

I think there are a number of cooperative efforts that have been on the books. I would be interested to see how they are going, what the response is from Europe.

I think this is a first step. I think this hearing today is going to focus on some of the cooperative arrangements that we have had, and I look forward to the testimony of the witnesses.

I congratulate you for getting us into this area.

I know that we are going to have a number of hearings, and I think they will be very detailed. I think they will be balanced. I think there may be times when there will be a divergence of opinion. But the chairman is always interested in getting the facts on the table. So we will hear witnesses of all sorts to bring the issues before us, so that this committee certainly will be in a position to make a good judgment.

I thank you, Mr. Chairman, and look forward to working with you and this committee. This is the beginning of a very exhaustive series of hearings in this whole area.

Senator LEVIN. Thank you, Senator Quayle.

As I mentioned before, Senator Quayle's involvement in this has been going on for years. His amendment, which provided for cooperative procedures, made it easier for NATO allies who had participated in cooperative research and development to then be able to actually procure weapons that we were producing as a result, in part, of their assistance.

So he has been a real activist in this effort to increase the efficiency of weapons procurement among NATO allies. We are grateful that he is the ranking member of this subcommittee.

Senator Thurmond, do you have an opening statement?

Senator THURMOND. No, I do not.

Senator LEVIN. Chairman Nunn had planned to be here this morning as he views this as one of the most important hearings the committee will have. Unfortunately, he is a bit under the weather and may not be able to attend, or, if he does, he will attend only briefly. He specifically asked that I convey his personal welcome to you, Secretary Taft, and to the other witnesses who will appear here today. He regrets, if he does not get here, that he is unable to do so.

Now we will call upon you for your opening statement, Secretary Taft.

STATEMENT OF HON. WILLIAM H. TAFT IV, DEPUTY SECRETARY OF DEFENSE

Mr. TAFT. Thank you very much, Mr. Chairman.

It is a great pleasure for me to appear before you today to discuss the critical subject which is the link between effective Trans-Atlantic armaments cooperation and our effective NATO conventional defense.

I would join with you in saying that this has been a joint effort all along, and, while we have our stars, and you have named them, the chairman of this committee, yourself, Senator Quayle and others, Ambassador Abshire, Lord Carrington all stand out.

This has also been a labor that has taken the support of many over the last 2 or 3 years and is going to continue to require that support.

I think it is by working together between the executive and the legislative branches with our allies, with industry, that this whole issue is going to stand or fall.

It is going to be a long haul. These weapon systems that we are dealing with take time to develop and to produce. We will need to stick together to do it right.

For some time now, our concern over the massive numerical advantage of the Warsaw Pact forces has been sharpened by the relentless pace of Soviet conventional force modernization.

Since the early 1970s, the Soviet Union has been introducing new generations of fighter aircraft—tanks, armored personnel carriers, self-propelled howitzers, and antitank weapons—with troublesome regularity.

The comprehensive modernization of Soviet conventional forces has been accompanied by new tactics, designed to exploit Soviet firepower and mobility, to collapse NATO forward defenses in a matter of days.

As you pointed out, Mr. Chairman, despite real growth in NATO defense expenditures and our historic lead in military technology, we have not matched the pace of Soviet modernization and Warsaw Pact modernization over the last decade.

Force balance ratios have not measurably changed in NATO's favor, and the Soviets have narrowed the margin of NATO's technological superiority.

Though the pace of Soviet modernization has been unmatched, the U.S. modernization program and similar allied efforts did stem the tide in the first half of this decade. Unfortunately, the austere defense budgets of recent years, not only in the United States but among other NATO countries, may speed the erosion of our conventional force posture.

In fact, in his annual report this year, Secretary Weinberger highlighted the results of unchallenged Soviet military investments in the 1970s. He wrote by one measure, and I quote, "which accounts for both the quantity and quality of forces, the Pact's advantage in in-place ground force combat power has increased from around 1.5 to 1 in 1965," over 20 years ago, "to more than 2.2 to 1 today."

A major reason for the modest return on NATO's substantial annual investment in defense is the high cost of accomplishing military R&D and production independently in too many different NATO nations.

The absence in too many instances of cooperative R&D and production robs the Alliance of full military benefit from the defense investments of partner nations.

Lack of cooperation and reliance on individual products of national defense industries throughout the Alliance in recent years have resulted in the wasteful duplication of R&D and weapons production. National weapons programs have led to the deployment of six types of main battle tanks, six types of fighter aircraft, and a plethora of antitank missiles, to which you referred, Mr. Chairman, and armored vehicles.

It also has resulted in failure to enter into cooperative R&D programs and production, which precludes attaining the economies of scale that drive down the unit costs of the weapons that we buy.

Each NATO nation ends up paying the full cost of developing systems that are needed, that are used, only in the end, by its forces, but needed by all.

Further, each nation incurs high unit costs, constrained by production runs that are limited to national needs. In essence, redundant programs for similar capabilities in several nations cause the

Alliance to pay several times to do the research to develop a capability that is needed by all member nations.

Further, reliance on national R&D and production has created standardization and interoperability problems that seriously hamper NATO's coalition warfare capability. For example, the absence of a common identification friend from foe capability diminishes the effectiveness of NATO air defenses against the enemy.

Further, persistent deficiencies in communications, support equipment, and logistics severely limit the ability of NATO forces to defend, maneuver, and reinforce effectively in wartime.

NATO nations incur an added burden as they undertake large and costly remedial efforts to achieve standardization and interoperability of the systems after they are deployed.

With declining defense budgets and rising costs for military capability, political leaders on both sides of the Atlantic have focused increasingly on armaments cooperation to better use financial and technological resources and thus improve NATO conventional defenses.

In the United States, Secretary Weinberger's strong support of increased armaments cooperation has been matched by the congressional commitment. Senators Nunn, Roth, and Warner sponsored legislation to fund cooperative programs with the NATO allies and Senator Quayle has sponsored legislation to streamline Trans-Atlantic cooperative procurement procedures.

These timely measures reinforced the efforts of NATO's leaders to encourage increased armaments cooperation and to foster a coordinated Alliance-wide approach to resources planning.

The cooperative efforts envisioned by the Nunn-Roth-Warner legislation have been enthusiastically endorsed by the allies. The U.K., Canada, and Italy are in the process of obtaining budget authority which is similar to ours provided in the Nunn-Roth-Warner law, and eight other NATO nations have already earmarked funds in their respective defense budgets to finance their shares of these programs.

The Department of Defense has rapidly implemented this legislation. DOD's objectives in pursuing these programs are to reduce the cost of R&D through allied financial participation in cooperative programs. This has been happening. Also to engage and direct sustained allied defense investment in NATO military priority areas, to strengthen NATO conventional defenses by fielding capable and common interoperable equipment through attention to interoperability early in a program's life, and to foster the Trans-Atlantic industrial teaming arrangements needed to develop shorter management lead times and more effective industrial cooperation.

Since February of last year, we have signed 12 memoranda of understanding with our allies to pursue cooperative programs. These memoranda are required by the legislation in order to qualify under its terms.

Negotiations are underway on eight other programs, five of which are the subject of signed statements of intent, which is the stage we go to first, before the memoranda are negotiated.

We also have earmarked almost $3 billion—$2.9 billion—to provide fiscal year 1988, 1989, and future year funding, through fiscal year 1992, for the 1986 cooperative programs and for future efforts.

In addition, we have focused our cooperative efforts on programs that address NATO's pressing conventional needs. The HAWK mobility, NATO identification system and 155 millimeter autonomous precision guided munition programs are examples of the directions we are pursuing.

The Nunn-Roth-Warner and Quayle amendments provided the legislative and financial framework essential to more effective armaments cooperation and improvement of NATO conventional defense. These legislative initiatives have significant potential to redress some of the severe R&D and weapons production problems facing NATO.

It is also essential that the progress already achieved in armaments cooperation and improvements in the U.S. manufacturing infrastructure not be derailed by legislative overreaction to the calls for protectionism in response to a loss of global markets.

Buy American and similar legislation also must recognize the Nation's critical national security interests in fair, free and open trade, cooperative R&D and joint production agreements with our allies to face the common threat.

Our industrial base, of course, does demand attention, and we are finding solutions to industrial base problems. These are important to long-term solutions to systemic problems, not those which try to anesthetize the pain of the most vocal industries with a protectionist solution.

Also, we must not place at risk the tremendous potential for improved defense that our cooperative armaments programs have created.

To sustain this success, DOD needs continuing congressional support in fiscal year 1988 and beyond.

I am very pleased with the support that we have had, I should try not only in the Senate, but in the House, where the leadership of the House Armed Services Committee and Congressman Chappell, the chairman of the House Appropriations Committee for Defense have also been very supportive.

I think what we have here, Mr. Chairman, is a program that commands support by its own common good sense. It is something that is in our interest everywhere you go. We know what we ought to do in the Alliance, in the Congress, in the executive branch, in industry, and the task is to be sure that we do not deviate from what we know we ought to do, and that we follow through and do the hard work, which is hard, of coordinating and identifying and pushing, pushing, pushing.

There is no one better in this town at doing that, particularly the pushing part, than the witness who will follow me, Dave Abshire, and I certainly would like to pay tribute, as you have done, Mr. Chairman, to his efforts in that respect.

He has kept me at it. I am sure he has kept the committee at it, and he has kept the allies at it. That is what has to be done.

Thank you, Mr. Chairman.

I will be glad to take any questions that you may have.

[The prepared statement of Mr. Taft follows:]

PREPARED STATEMENT BY WILLIAM H. TAFT IV, DEPUTY SECRETARY OF DEFENSE

Mr. Chairman, distinguished members of the committee, it is a great pleasure to appear before you today to discuss the critical link between effective trans-Atlantic armaments cooperation and NATO conventional defense.

For some time now, our concern over the massive numerical advantage of Warsaw Pact forces has been sharpened by the relentless pace of Soviet conventional force modernization. Since the early 1970s, the Soviet Union has been introducing new generations of fighter aircraft, tanks, armored personnel carriers, self-propelled howitzers and antitank weapons with troublesome regularity. The comprehensive modernization of Soviet conventional forces has been accompanied by new tactics designed to exploit Soviet firepower and mobility to collapse NATO forward defenses in a matter of days.

Despite real growth in NATO defense expenditures and our historic lead in military technology, we have not matched the pace of Soviet modernization in the last decade. Force balance ratios have not measurably changed in NATO's favor and the Soviets have narrowed the margin of NATO's technological superiority. Through the pace of Soviet modernization has been unmatched, the U.S. modernization program and similar allied efforts did stem the tide in the early 1980s. Unfortunately, the austere defense budgets of recent years may speed the erosion of NATO's conventional force posture. In fact, in his annual report this year, Secretary Weinberger highlighted the results of unchallenged Soviet military investments in the 1970s. "By one measure," the Secretary wrote, "which accounts for both quantity and quality of forces, the Pact's advantage in in-place ground force combat power has increased from around 1.5 to 1 in 1965 to more than 2.2 to 1 today."

A major reason for the modest return on NATO's annual defense investment is the high cost of accomplishing military R&D and production independently in too many different NATO nations. The absence, in too many instances, of cooperative R&D and production robs the Alliance of full military benefit from the defense investments of partner nations. Lack of cooperation and reliance on the individual products of national defense industries throughout the Alliance in recent years have resulted in:

—The wasteful duplication of R&D and weapons production. National weapons programs have led to the deployment of six types of main battle tanks, six types of fighter aircraft, and a plethora of anti-tank missiles and armored vehicles within NATO.

—Failure to enter into cooperative R&D programs and production precludes attaining the economies of scale that drive down the unit price of weapons systems. Each NATO nation ends up paying the full cost of developing systems needed not only by its forces, but by all Alliance forces. Further, each nation incurs high unit costs constrained by production runs limited to national needs. In essence, redundant programs for similar capabilities in several nations cause the Alliance to pay several times to develop a capability needed by all member nations.

—Further, reliance on national R&D and production has created standardization and interoperability problems that seriously hamper NATO's coalition warfare capability. For example, the absence of a common identification friend-from-foe capability diminishes the effectiveness of NATO air defenses against the enemy. Further persistent deficiencies in communications, support equipment and logistics severely limit the ability of NATO forces to defend, maneuver, and reinforce effectively in wartime. NATO nations incur an added burden as they undertake large and costly remedial efforts to achieve standardization and interoperability. With declining defense budgets and rising costs for military capability, political leaders on both sides of the Atlantic have focused increasingly on armaments cooperation to better use financial and technological resources and, thus, improve NATO conventional defenses.

In the United States, Secretary Weinberger's strong support of increased armaments cooperation has been matched by congressional commitment. Senators Nunn, Roth, and Warner sponsored legislation to fund cooperative program with the NATO allies. Additionally, Senator Quayle sponsored legislation to streamline trans-Atlantic cooperative procurement procedures.

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The Department of Defense has rapidly implemented this innovative legislation. DOD's objectives in pursuing these programs are:

—To reduce the cost of R&D programs through Allied financial participation in cooperative programs.

—To engage and direct sustained Allied defense investment in NATO military priority areas.

—To strengthen NATO conventional defenses by fielding capable and common interoperable equipment through attention to interoperability early in a program's life.

And, to foster the trans-Atlantic industrial teaming arrangements needed to develop shorter management lead times and more effective industrial cooperation.

Since February of last year, we have signed 12 memoranda of understanding with our allies to pursue cooperative programs. Negotiations are underway on eight other programs, five of which are the subject of signed statements of intent. We also have earmarked $2.9 billion to provide fiscal year 1988, 1989, and outyear funding through fiscal year 1992 for the 1986 cooperative programs and future efforts. In addition, we have focused our cooperative efforts on programs that address NATO's pressing conventional needs. The HAWK mobility, NATO identification system, and 155mm autonomous precision guided munition programs are examples of the directions we are pusuring.

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It is also essential that the progress already achieved in armaments cooperative and improvements in the U.S. manufacturing infrastructure not be derailed by legislative over-reaction to the calls for protectionism in response to a loss of global markets. Buy American or similar legislation also must recognize the Nation's critical national security interest in fair, free and open trade, cooperative R&D, and joint production agreements.

Our industrial base does demand attention, and we are finding solutions to industrial base problems. These are important, long term solutions to systemic problems, not those which try to anaesthetize the pain of the most vocal industries with a protectionist elixir. And we must not place at risk the tremendous potential for improved defense that our cooperative armaments programs have created.

To sustain this success, DOD needs continuing congressional support in fiscal year 1988 and beyond. The Department's request for $292.4 million in fiscal year 1988 will enable us to maintain our effort, and to take advantage of keen Allied interest in expanding it.

Senator LEVIN. Thank you, Mr. Secretary, for your testimony and for your efforts in this direction.

Before we get to the direct subject of the hearing today, I would like to ask you about your testimony relative to the Warsaw Pact's advantage in in-place ground force combat power. You indicate that it has increased from 1.5 to 1 to 2.2 to 1 today under some accounts.

What account are you referring to?

But before you answer that, Senator Thurmond had pointed out that we now have only 5 minutes left to get to a vote. That is why a number of us have left. I will be leaving in a moment or two, when Senator Wirth gets back. That is the reason for our departure.

My question to you concerns your testimony at the bottom of page 1 and the top of page 2, where you say by one measure the advantage of in-ground force combat power has grown to the advantage of the Warsaw Pact from 1.5 to 1 in 1965 to more than 2.2 to 1 today.

I am just wondering what measure it was that you were referring to.

Mr. Taft. Mr. Chairman, this is a way in which we measure the numbers of forces, the force structure, as well as the firepower that the particular systems would put on in a conflict situation.

It would have to do with sustainability as well as the actual equipment.

Senator Levin. Is there a particular name for that measure that you are referring to?

Mr. Taft. No.

This is meant to be a comprehensive measure that takes into account force structure, the modernization of the equipment and the sustainability of it. It is the whole combined effect.

The model that we use is available to the committee, and we would be glad to share that with you.

Senator Levin. If you would supply that to the committee, it would be useful.

Mr. Taft. Some of the features of it are not to be discussed in this setting.

[The information follows:]

Some features of it are not to be discussed in this setting. However, the methodology referred to is a modification of the Weapons Effectiveness Index/Weighted Unit Value (WEI/WUV) methodology developed by the Army Concepts Analysis Agency in the 1970s. The WEI/WUV methodology draws on the advice of groups of experts to determine relative scores (WEI) for weapons and weapon categories. These scores are then multiplied times the inventory of weapons systems on both sides to determine the force potential (WUV) of the sides. Thus, the methodology incorporates both quantitative and qualitative aspects of the forces. Since the actual inventories and orders of battles for the two sides are classified, the resulting force potential scores are also classified.

Senator Levin. Just on this point, do you believe that the Warsaw Pact believes that they have a stronger conventional position conventionally, relative to the NATO alliance, than they did, say 10 years ago?

Mr. Taft. I believe that they should believe that—yes, sir—that they have been over the past—and this is not so much in this decade, but particularly in this figure that I gave you. It has a starting point of 1965. In the seventies they would have given themselves very good marks.

I think since 1980, as I indicated, we have probably been going more in balance.

Senator Levin. Let me ask my question again. It is a very specific question.

Do you believe that the Warsaw Pact believes that they are in a stronger position now conventionally vis-a-vis NATO than they were 10 years ago?

Mr. Taft. Ten years ago would be a close question, because we did do well in the early part of this decade.

I think, if you looked at these numbers and you took them from 1965 to 1981, you would have a lot worse answer than you have today, in 1987.

Senator Levin. Well, take your numbers just from, say, 1980.

Mr. Taft. I don't know what those numbers are. But, as my testimony indicates, the gap has not been increasing so much in recent years.

Senator Levin. Would you supply those numbers from 1980 to date, as well as from 1965 to date?

Mr. TAFT. Yes, sir.

[The information follows:]

There are a variety of measures by which the Soviet Union and the Warsaw Pact might conclude that they are in a stronger position conventionally vis-a-vis NATO today than in 1980 or 1965.

In the mid-1960s, Soviet land and tactical air forces consisted of about 1.4 million men. By 1980 they had expanded to over 2 million men, and today those forces number approximately 2.4 million.

The commitment made by the Soviet Union to maintaining the strength of its armed forces is reflected in its production levels. For the decade 1977–1986, the U.S.S.R. built 3000 ICBMs and SLBMs, the United States 850; the U.S.S.R. 140,000 surface-to-air missiles, the United States 16,200; the U.S.S.R. 24,000 tanks, the United States 7,100; the U.S.S.R. 90 submarines, the United States 43; the U.S.S.R. 28,200 artillery pieces, the United States 2,750.

The Warsaw Pact continues to hold a quantitative advantage in forces on-line in Europe, with a 2-to-1 lead in major combat items, such as tanks, attack helicopters, and combat aircraft. In ground combat power alone (a measure that includes the number and quality of armor, antiarmor, and fire support weapons) the Warsaw Pact has widened its advantage over NATO across the Central European theater from about 1.5-to-1 in 1965, to about 1.9-to-1 in 1970, to more than 2.2-to-1 in 1986. In tactical air power the Warsaw Pact widened its advantage from 1.5-to-1 in 1965 to 1.7-to-1 in 1985.

The Soviet Union operates 326 submarines as compared with approximately 230 for NATO.

From 1967 to 1980, the Soviets increased the total number of their divisions from 148 to over 170. Today the Soviets have 211 active and 5 inactive divisions.

Senator LEVIN. Finally, would you agree with the International Institute for Strategic Studies in London, which has written the following:

> Our conclusion remains that the conventional military balance is still such as to make general military aggression a highly risky undertaking for either side and there would appear to be insufficient overall strength on either side to guarantee victory. The consequences for an attacker would still be quite unpredictable and the risks remain incalculable.

Briefly would you agree with that conclusion?

Mr. TAFT. Yes, sir.

Very briefly speaking, I fundamentally would subscribe to that today. What that says to me is deterrence works. It does not say there is a balance.

You need much more than an imbalance to have a failure of deterrence.

The Soviets can have a superiority in combat power, as I indicate, but still not sufficient to make them comfortable, as the statement you read said that they can prevail.

Senator LEVIN. And we are talking about conventional forces?

Mr. TAFT. That's conventional forces. And, of course, there are other forces.

Senator LEVIN. Thank you.

Senator Quayle.

Senator QUAYLE. Thank you, Mr. Chairman.

I did not hear the first part of the Senator's questions, but let me follow up on the matter of conventional balance with you, Mr. Secretary, if I can.

You said deterrence has worked, and it certainly has worked. Many would argue that conventional forces are a good deterrence. But also many point out that it has been the nuclear deterrent that, in fact, has been the ultimate deterrent to the Soviet Union.

As a matter of fact, the no first use policy, which has come under some criticism, is still part of our doctrine, that if, in fact, we have to, and Bernie Rogers comes up here every year and tells us of the inadequacy of conventional forces and that he would have to rely on nuclear weapons very early on.

My question is this. As we look at trying to ascertain or perhaps restore the conventional balance, the balance in conventional weaponry, particularly in a post-INF environment, where we would be relying less on a nuclear deterrence, have we done any good cost estimates of what we are really talking about?

In particular, what kind of increases in defense spending are really going to be necessary to enhance this deterrence?

I think we are willing to invest in peace and invest in deterrence. But we sort of bandy the idea of conventional forces around and conventional balance around.

I am curious if you have any study or any idea of what the price tag might be for adequate, conventional modernization to enhance and increase our deterrence capabilities?

Mr. TAFT. Well, Senator, I would say to you that the price tag is substantial, and more substantial at this point, in terms of the budgets that we have been presenting to the Congress, than we have been willing to pay.

My own belief is that we submitted, as you know, a budget this year of about $311 billion for the defense function. This anticipated a program of growth of about 3 percent a year over the next 5 years in real terms, consistent with the growth of the economy that is projected, not to take more out of the economy or less.

In reaching that program and developing that budget in the Defense Department, we felt there were a number of things in addition to that that we could very usefully do, that would add to our deterrence and our capability in Europe. Even that budget and program, in short, did not include everything that I feel would help to strengthen us and to deter war. It embodied some risks, too, that we felt we had to take in view of the fiscal situation, et cetera.

So, in terms of what the additional expense would be, my suggestion to you would be—and, of course, you know what has happened and is in the process of happening to our request for fiscal year 1988 it is being reduced, and it appears that the Congress will not even fund that.

So, my reaction to your question is simply to say that we certainly should be doing more. The bill that we could present ourselves in a hypothetical sense that would be useful for deterrence is evidently higher than we are willing to pay.

I would start with the program that we submitted in January of this year. This seems to me to be a good start. Even that seems to be too much for the Congress, and I am very disappointed about that.

Before we talk about higher levels, which we could do, let's just try to do the beginning.

Senator QUAYLE. But I think what needs to be done—and I would hope you might go back and try to get some analysis and get some statistics—and I know that this subcommittee is going to get into that in this hearing and in others—to show us what the investment in defense would actually require as we come to rely more on conventional forces for peace and deterrence, rather than our nuclear capability.

It appears that is the direction in which we are moving, and if that is the direction where we are moving, in the past we have been able to have deterrence on a cheaper basis.

It is my thesis that in having the conventional deterrence, you have fewer nuclear weapons and it is going to cost more. The price tag is going to go up.

Since, in fact, it costs more, I think that the Congress had better be prepared, particularly as we begin seriously to cut the defense budget.

So we can't have it both ways. We can't say well, we're going to rely more on more expensive weapons, i.e., conventional weapons, and at the same time cut the budget. But we really need some analysis. We need some statistics and we need some data bases from which we can work.

I would hope that you might be able to begin to furnish us those because this is going to be a very substantive, detailed discussion that we are going to have in this country, probably for the next several years, probably at least the next 5 years surely, with a 5-year plan. I can see that.

We really need to have some barometer and some measurement as we proceed down this course. We need to know what the risks are going to be as we start to make some of these decisions.

So I would hope that you would be able to go back and collectively analyze where we are and be able to begin to furnish us some good statistical bases from which we can operate and have this very informed and enlightened discussion.

Mr. TAFT. Senator, let me just say that I agree with you. The conventional forces are more expensive, and a conventional policy, defense policy, is more expensive than the nuclear. That is why we went to nuclear in the fifties in the first place.

People who feel that shifting to a conventional defense policy is going to save money I think are being misled. So I fully agree with you there.

We will work with you on those points, as to what would be additional in the conventional budget. But it is a complicated thing to submit an overall budget. We have done that, and the conventional aspect of our budget at $311 billion is higher than the Congress is granting. So it is not that just the nuclear side is being reduced.

Again, if it is just the conventional side, let's start at least with the conventional side in the $311 billion budget. We certainly need that. We need that even in a nuclear world. And we will need a bit more.

But to start considering budgets that would be not $311 billion, but $320 billion or $330 billion, it does strike me that in the present environment, that is not the direction that the Congress has been headed. You are looking at budgets in the $300 billion and $290 billion area.

The last budget we did was $311 billion, and that would be good.

Senator QUAYLE. Let me just say this. The whole conventional modernization program and how we go about modernization and making our systems smarter, more survivable, how we would be able to go to Soviet weaknesses, in fact, would be a great augmentation to our deterrent capability.

Let me just talk about a couple of those programs that are on the front burner.

One is the extended air defense and our cooperative arrangement with extended air defense. I know you have had some involvement.

I wonder if you could talk about the importance of this cooperative arrangement with our allies and working on getting extended air defense, particularly as we move to a post-INF involvement, as we look to what will be the SS-21s, after we get rid of the SS-20s, and other things—cruise missiles, planes—and to having this total, extended air defense, which I think is one of our vulnerabilities right now in Western Europe.

We have a cooperative effort. The Senate has $100 million in its budget.

I just want to know from your viewpoint about the importance of this cooperative effort on extended air defense and how you think it meshes in perhaps the total NATO strategy and our cooperation with our alliance.

Mr. TAFT. Well, the short of it is that this is one of the projects that we are very definitely looking at and looking at with an eye to its being a cooperative program. It is a common issue for us, and it is not one that we can wait very long on.

We have made that point in the Alliance. I think there is agreement with it that we need, by the middle of the next decade, to have a better system for extended air defense than we are presently positioned to have.

So we need to cooperate in that and we will be working with the allies on that. It is one of the subjects on the table.

Senator QUAYLE. Let me ask just one other thing on that.

How should that be worked?

Should that be a joint service project, extended air defense?

Mr. TAFT. I think it should be a project in which the particular services, Army and Air Force, certainly are involved and will bring to bear the full range of DOD.

Senator QUAYLE. Thank you, Mr. Chairman.

Senator WIRTH [presiding]. Secretary Taft, again, we are pleased to have you here. It is good to see you again. Thank you for coming up.

Before getting to a more extensive question, I would just like to note that the budget situation is probably significantly worse than you were describing as well. When the President signed the Gramm-Rudman fix, if there is no agreement on raising revenue, if there is no agreement that a different kind of package be put together in reconciliation, we then get into a sequester program, which means, as you know, that the defense budget would go down to about $285 billion, which would put the efforts that many of us would like to make in the conventional area at very significant risk, and would cause the kind of problems that you have and that we have to be even more severe.

Mr. TAFT. We are fully aware of this, Senator.

Senator WIRTH. I just wanted to be sure, for the record, that we all understood that we are not talking about $311 billion or $330 billion. We are probably hovering at around $285 billion-plus, and that is a more realistic number for us to be thinking about.

Mr. TAFT. I think this is the point I made.

Senator QUAYLE. Ask him if he supported Gramm-Rudman. [General laughter.]

Ask him if the Secretary of Defense recommended signing that. [General laughter.]

Senator WIRTH. I want, if I might, to get you to comment on some of the testimony we are going to hear later.

In his written statement, Mr. Callaghan argues that, "Nearly all Europeans and Americans agree that the single greatest impediment to increasing European-North American cooperation is the fragmented European defense industrial base."

Mr. Callaghan goes on to explain later in his testimony that the United States, "Has contributed to this fragmentation by dealing bilaterally with each European government, instead of dealing with them collectively."

I think Secretary Weinberger has made some efforts to change that approach. I understand that he has made some offers to the Europeans that the Europeans have rejected, to get some kind of greater cooperation.

I was wondering, for us and for the record, Secretary Taft, if you would indicate whether or not you agree with Mr. Callaghan's assessment of the seriousness of the problem. Would you then go on to describe for us the efforts that Secretary Weinberger has made and the response that that has received from our allies in Europe.

Mr. TAFT. I think, as a general proposition, it is agreed that we have too many different enterprises in the different countries pursuing the same subjects. That is a problem that arms cooperation and the Nunn-Roth-Warner legislation is directed at.

That is a problem that the allies are directing their efforts to in both responding to Nunn-Roth-Warner and also in the efforts that they undertake among themselves.

I think that there is, not just across the Atlantic, but in Europe itself, an awareness that we need to have more cooperative, coordinated efforts.

While the Nunn amendment and, of course, our own efforts in this regard are directed toward projects in which the United States is a participant, and often a major or a dominant participant, we should be aware that there can be very important projects pursued by the Europeans in which we do not participate. Even as some of the Nunn amendment programs, not all of the Europeans participate in them. Some of them are three countries, some of them five, some only two—whatever the case may be.

Each system and each effort to solve a military requirement should be addressed on its own facts, and I think when the requirement is to be met and a particular set of countries, perhaps including the United States, perhaps not, develops a solution, if they have this problem, should then go cooperatively to solve it.

As I say, the Nunn amendment naturally speaks only to those programs in which the United States is involved, but it is not intended to discourage Franco-German cooperation or German-British, or whatever the case might be, in which we are not a part.

In those instances, where we are not a direct participant, we have tried—and this, I think, is what you perhaps are referring to, to be supportive in terms of encouraging those efforts by making available our technology under proper safeguards, or working together, not perhaps as a buyer or a producer, but as a supporter of the project.

Secretary Weinberger has made it clear to European consortia, for example, in the European fighter aircraft consortium, that we would be glad to cooperate although we are not a member of that and do not expect to be participating in the R&D or the production of it. But that is not to say that we should not be supportive and encouraging of that effort at arms cooperation, which is what it is, even though it is not arms cooperation with us, but arms cooperation of four major European countries, and that is good, too.

So we have undertaken uniformly and consistently to support arms cooperation wherever we find it—whether we find it on systems that we are building or whether we find it on systems that the allies are building or researching and developing without us.

We think either way it is helpful for us to do that, and the proper thing is simply to be sure that the right people are engaged, that there is not duplication of effort and that two different countries are not pursuing the same thing.

That is, I think, a problem that is realized, as Mr. Callaghan's testimony says, by the Europeans as well as by ourselves. They are taking steps to do it.

One of the surprising things that I find when I go over to Europe is that, while we say that arms cooperation is something we are very interested in now and we are putting a full percentage of our budget into it—and it's very impressive with the Nunn amendment, and it is a lot of money—they will say well, you know, 60 percent of our budget is in arms cooperative programs already. What they mean is inter or intra-European.

So they have a history here and what they need to do is to build on that, too.

Senator WIRTH. Let me ask you to follow up on that. You might respond to Mr. Callaghan's suggestion that the Defense Department should grant—this is as I understand his suggestion—should grant the NATO allies access to our defense markets only if they grant the same access to each other and if they turn in their bilateral agreements for some kind of broader umbrella agreement. We all talk about cooperation being a good thing, sort of like motherhood, and we have been talking about that for 30 years.

The question is how do we go about forcing this more aggressively and I think that that is what Mr. Callaghan is trying to get at.

What is your response to that?

Mr. TAFT. My feeling would be that there is an inherent tension in the idea of forced cooperation, and either you are cooperating or you are forcing. I think that the logic of the situation is what should be stimulating the cooperation.

My sense of it is that it is there. I do not think that a new case on our part to the allies of the sort that you are discussing, which essentially would attempt to dictate their relations with each other and not their relations with us, would be constructive in the Alliance.

Senator **Wirth**. Senator Thurmond.

Senator **Thurmond**. Thank you very much, Mr. Chairman.

I just have a couple of questions, Mr. Secretary.

Mr. Taft, given the need for more cooperative approaches to armament procurement, what advice can you offer the Congress concerning domestic economic concerns about allowing U.S. defense dollars to go overseas?

Mr. **Taft**. Senator, I would offer the advice that in the arms areas, the defense trade area, we currently have a positive balance of trade with the NATO allies. We have always enjoyed this, and it is a significant one.

In the most recent year, it was 1.6 to 1. It has been as high as 4.8 to 1 in 1983. Over a 5-year period, it has been almost 3 to 1, in the last 5-year period that we have—2.9 to 1 in our favor.

This is the result of the trade policies that we have had in which, under reciprocal agreements, we and our allies can trade in arms without tariffs and without protectionism.

This has been something that I think we ought to continue, not for the reason that it is in our favor as a trade deficit, although it is, but because it makes economic sense.

It generates the weapons that the Alliance needs in a more efficient way, at a cheaper price, and that is the reason to do it.

We have, in the result, a situation which actually creates more American jobs for us than we otherwise would have. So it would seem to me that there should be no concern that these policies have cost the United States jobs.

I think there should be a concern that protectionism on our part in this area would not only have the impact of making arms cost more for ourselves and the allies, but also would lose us jobs.

Senator **Thurmond**. Mr. Secretary, you paint a pretty grim picture for NATO.

How will the zero-zero INF agreement impact the present and future conventional force imbalance?

Mr. **Taft**. Senator, my feeling is that a zero-zero balance in INF would be consistent with an effective deterrent that would be a combination of the conventional forces that we have and the strategic forces that would remain, aside from INF and the nuclear forces short-range that would remain.

This is also the assessment of General Galvin, the CINCEUR/SACEUR, and it is not to say that we adopt this zero-zero arrangement that we do not continue to have to do a lot of things in the conventional area. We do.

We have a long list of them. They have been before you in our budget program and we hope that you will fund them. They need to be done.

The risks, of course, of not doing the conventional improvements increase in a less nuclear world, and so they become more important. But that is not to say that they were not required before. They were, and that is why we have been proposing them for many years.

Senator **Thurmond**. General Rogers has caused considerable concern among some people. How do you reconcile his position with the Pentagon's?

Senator **Cohen**. General Rogers is out. [General laughter.]

Mr. TAFT. I think, Senator, you would have to ask General Rogers about that. He, I know, has testified before this committee, and I do not share his reservations about the prospect of zero-zero INF. As I have said, nor does General Galvin nor do the Joint Chiefs of Staff, who have analyzed it at great depth.

Senator THURMOND. Do all of the members of the Joint Chiefs share his position that you are stating now?

Mr. TAFT. Yes, sir, and that is what they have stated to the Secretary.

Senator THURMOND. Which is inconsistent with that of General Rogers.

Mr. TAFT. Sorry?

Senator THURMOND. Which is inconsistent with that of General Rogers.

Mr. TAFT. As General Rogers' position has been reported in the press, it is different from the Chiefs', yes, sir.

Senator THURMOND. Thank you very much.

Thank you, Mr. Chairman.

Senator WIRTH. Senator Cohen.

Senator COHEN. Is that to say that the Joint Chiefs of Staff believe that the zero option will not affect the conventional imbalance, will not expose its weaknesses even moreso?

Mr. TAFT. It is to say they feel there are things we need to do that we have had it in mind to do and probably needed to do before—and probably become more important to do in the future without INF than with it.

But they do support the zero-zero option.

Senator COHEN. They have also, I think, indicated that it only intensifies the need to correct the conventional imbalances.

Mr. TAFT. That's right.

But my only hestitation in joining completely in what you have said is they have thought these things on the conventional imbalance were important to do 3 years ago, without zero-zero as well. They still think so.

Senator COHEN. Mr. Secretary, I think you used a phrase earlier having to do with free, fair, and open trade. Those, of course, are catch words that are familiar to a lot of us.

I was wondering if you have had any conversations with Ambassador Richard Burt, who, in a speech to a West German audience earlier this year, had some rather harsh things to say about the unfair trade barriers erected against United States exports. He specifically referred to the new attack helicopter being developed by the West Germans and the French without any U.S. participation.

He went on to talk about restrictions concerning coal mines, steel mills, shipyards, airlines, telecommunications—under protection by the West German Government.

Is he expressing a personal opinion without any basis in fact, or is it something that is shared by the Defense Department and not expressed?

Mr. TAFT. Well, Senator Cohen, my writ does not run to some of the areas that you mentioned in the commercial field.

My impression is—and this would be a personal opinion—that the trade barriers in those areas are very unwise and should not be maintained by the Europeans.

But it would be really perverse if we were, because of our unhappiness with the barriers in those fields, to erect further barriers in the one field where they don't exist and where the trade balance is very much to our benefit—which is the defense trade, and which is a security issue and not really a trade issue.

Senator COHEN. But Ambassador Burt said just the opposite. He said trade barriers do, in fact, exist, and do exist with respect to U.S. participation in some of the European projects.

Mr. TAFT. On the particular projects that I have been engaged in, I really do not believe that is a fair statement. But most of the things that I heard he was mentioning are not in the defense area.

Senator COHEN. Well, he specified——

Mr. TAFT. He did specify the helicopter.

Senator COHEN. Yes.

What is the position of the Department of Defense on that?

Mr. TAFT. Our feeling is that the Germans and the French are discussing that with each other and they have a project they are interested in doing. I don't know exactly what stage it is in. But we will be supportive of that, and I have not been led to believe that they would be excluding cooperation with us, although they will be the main R&D participants and the main producers.

Senator COHEN. Well, I would not want to see the sort of inverse situation or perverse situation, in which the State Department becomes more concerned about the state of our defense than the Defense Department.

Mr. TAFT. There is no danger of that, sir. [General laughter.]

Senator COHEN. Well, I am not sure. Ambassador Burt is speaking rather strongly to a close ally, and certainly his background leads me to believe that he is very much involved in defense issues and very knowledgeable about defense issues. If he is indicating that there are, in fact, trade barriers being erected and we are not acknowledging them in the interest of promoting a greater cooperation, I think there is a problem.

Also, it has been indicated by someone in our embassy that to the extent that European allies are erecting a small little "mafia"—and that is their phrase, not mine—designed to cut out the defense companies of the United States, they are inviting the kind of trade reciprocity that they are erecting.

I must tell you that I get a bit annoyed to listen to all of our allies, particularly those in the Far East, at least, complaining about trade barriers being erected, as if somehow this is the first time it's being floated by the United States.

When I have traveled to various countries around the world and asked them about their trade barriers, it becomes a matter of cultural heritage, and somehow their cultural heritage and protection is to be distinguished from protectionism here at home.

I would just say to you and to others here and to the crowd outside—and, by the way, I have never seen such a crowd lined up outside to attend one of our hearings. I assume they are not from the United States——

[General laughter.]

Senator COHEN [continuing]. And are concerned about the direction in which we are going.

But I must tell the crowd outside as well as those who are watching that, to the extent our allies continue to practice their form of protectionism and then decry the rising tide of protectionism in the United States, they are making a grave error. It is, in fact, a two way street, and to the extent they practice it in their countries, they are going to find it reciprocated.

One of the things that most of us are concerned about is this element of reciprocity. Frankly, I do not want to see a structural disarmament practiced by NATO, as that phrase is used.

I also don't want to see this country engage in what is tantamount to economic, unilateral disarmament by constantly invoking the phrase "free trade," while all of those about us are not practicing it.

I will reserve the rest of my comments for Mr. Abshire when he testifies.

Mr. TAFT. Senator, I fully understand the sentiment that you have expressed. Let me just say I think the danger is that you can go left or right here. You can go more protectionist here or you can go less protectionist there.

I really believe that the right way is to go less protectionist there, not more protectionist here.

I just do not think that we are going to help ourselves by erecting these barriers.

Now you have questions of confidence, questions of good faith and all of this, and a lot of very strongly felt economic pressures that get engaged in these discussions. These are not easy for politicians to address in Europe or here.

My feeling is that we would be making a big mistake to say well, because of the problems that exist in this area or that area or a particular instance in the defense arena—and there are some, and there are some the other way, too, where they point out to us that it would be a big mistake to take those and to say okay, we are going to go home now. That is not the answer.

The answer is to continue working these problems where we find them. When we find a situation in which we are being excluded, if that is the case, we should work it, saying we don't think that is the way it should be, and we should attempt to become included and to offer the same opportunity to them.

It is just a choice of which direction you go, and we are in the middle now.

Senator COHEN. Mr. Secretary, our European friends will find no greater forum for support of the NATO Alliance than this committee. I think time after time we have had cases in which we have had to pass upon the authorization of specific weapon systems which some of us felt did not meet our validated needs, and, in fact, were too expensive and were not sufficient to meet the capabilities that were required. We nonetheless had agreed to continue the funding of those programs in the interest of holding the Alliance together.

I think that Dr. Abshire would confirm that.

So you would not find a more receptive committee to a call for greater cooperation.

Mr. TAFT. I appreciate that.

Senator COHEN. But that message also has to go forward, that they cannot on the one hand call for greater cooperation and then take actions that are inconsistent with promoting that cooperation.

Mr. TAFT. I have no problem in carrying that message, too. I agree with that.

Senator COHEN. Thank you, Mr. Chairman.

Senator LEVIN [presiding]. Secretary Taft, on Senator Cohen's point, you say that the answer is less protectionism there rather than more protectionism here, and I think most of us would agree with that as a general approach. But we have heard it for a long time.

Mr. TAFT. We have believed it.

Senator LEVIN. We have heard the motto that we ought to try to reduce barriers there. We have heard that motto for a long time. But we have not seen a lot of success, and this issue is particularly sensitive in my State.

But it would seem to me that you ought to be more forthcoming with us on what efforts were made by the Defense Department to reduce those barriers among the European allies.

One of the questions that I know Senator Wirth asked you had to do with the efforts which Secretary Weinberger made to reduce barriers, at least between the allies. That is another form of barrier which hurts all of us. The barriers that they put up to our products also hurt, very painfully.

But let's just talk about that.

Can't you be a little more specific as to what those efforts were? What pressures were brought to bear on those allies to reduce those barriers that you say we all ought to be trying to reduce?

Mr. TAFT. Well, Mr. Chairman, principally they are the pressures of logic. They are the pressures, first of all, of the Soviet threat, which we all face, and the austere budgets that we are provided to deal with them.

We have pointed out time and time again to our allies that we simply cannot fail to cooperate and waste the money that will be wasted in duplication of effort if we do not cooperate with each other.

That is the argument we make, and we make it consistently. We make it about everything. We make it about ships, we make it about planes, we make it about tanks, we make it about antitank missiles, air defense, whatever the case may be.

We have a fair number, I think, of successes to point to in this area, and we have some areas where we have not been as successful as we would like and that we need to continue to work on. But it is not a question of even having a general overall policy.

We have that. And, in fact, the Europeans have that.

What these things come down to are particular cases, and you have to address those, each of them. They are very big cases, some of them—aircraft and ships. The NATO frigate is an example. They involve a lot of money and jobs and things that are important, and things that are difficult are involved.

But you have to address them each by each, and that is what we do. The general policy is there and subscribed to throughout the Alliance.

Senator LEVIN. The policy is words.

Mr. **Taft**. I understand that.

Senator **Levin**. The real problem is the American taxpayers and all of us representing them, are spending tens of billions of dollars 40 years after World War II to continue to defend Europe and our common interest. The American taxpayers are asking themselves why are we building 10 or 11 antitank weapons? Why don't we have an interoperable communications system?

What is going on here if the threat, which you say is so immense that it ought to drive us—and I agree that it ought to be able to drive us—to interoperability, has not? Why hasn't it? Why should we continue to lay out the tens of billions of dollars to put our troops in Europe?

And, by the way, I support our troops being there. But I am asking you why do we spend tens of billions of dollars for that purpose if we can't get the Europeans to eliminate some of the terrible, wasteful, acquisition policies which duplicate weapon systems?

If the threat is not enough to force them to come up with one antitank weapon, why is it enough for us to spend tens of billions of dollars to keep all those troops there?

Mr. **Taft**. Mr. Chairman, the reason why we have these duplications, the reason why, for instance, we do not have, as you mentioned, the common communications system or a single antitank weapon, is because the last time when somebody was out there developing those systems, they did not do what we are now doing.

I completely agree with you. It is not a question of policy. It is not a question of whether people say they subscribe to this.

The question is when it comes down to cases and somebody is out there actually building an airplane or thinking of developing one or developing an antitank system, does he, in fact, hear from everybody else who is interested in the same thing, and does he wonder and feel the pressure on that system, because it has to be the specific case to go and do the right thing and develop it jointly, cooperatively, to consider who can play that role most efficiently.

We are now, under the Nunn amendment, doing that. We have a process for identifying common requirements and in the United States for assuring that if we have a requirement, before we enter into a research or development program to meet it, that we specifically address the issue of cooperative research and development with our allies who might have the same requirement.

Our allies are doing the same.

The policy is well known, but it is cases, one by one by one.

Senator **Levin**. Mr. Secretary, it is also willingness to apply some pressure to friends.

We have just done it—although I am not so sure successfully—with our closest ally, Canada. Geographically, at least, we have no closer ally, except Mexico. Canada is about as close as they come.

We applied plenty of pressure in those negotiations—at least we should have—and the question is what pressures are we applying even to our friends?

We are under great economic pressure. Even with allies and friends you have to negotiate things, you have to apply some pressure, some prodding.

I just do not see, from your answer, that we have done anything other than to focus on the threat out there, and that ought to be enough to force us to do some things cooperatively. Let me ask you a specific question.

We have identified conventional deficiencies in the conventional defense improvement program. Can you tell us what percentage of those deficiencies will be cured in a cooperative way under the NATO cooperative program? In other words, we have identified the deficiencies. Presumably there is a numerical amount—$10 billion, $50 billion, $100 billion—of needed conventional requirements. We also now have a cooperative program in NATO. With the Nunn amendment and in other ways we have identified some things that we are going to do, case by case, as you put it.

What percentage of our needs is going to be satisfied in a cooperative way?

Mr. TAFT. I would have to develop that material for you, Mr. Chairman. I don't know exactly what is in that list and what these things respond to.

As you know, our efforts in the cooperative program are limited more by the funding available to us, rather than a lack of things to do.

[The information follows:]

CONVENTIONAL FORCES AND ALLIANCE DEFENSE

It is difficult to predict the percentage of our requirements that will be satisfied through cooperation in the future. I can tell you what we are aiming for and perhaps offer some indicators.

NATO identified nine critical deficiencies for special emphasis in the Conventional Defense Improvement effort. These are expressed in terms of mission area difficiencies. Some of those which require equipment might be appropriate for international collaboration, and we are examining each program for acquisition of conventional systems to determine the cooperative opportunities. However, since the time scale for correcting the deficiencies has been left open—and may change as the threat evolves—neither the costs of the equipment requirements or the costs of the other requirements, such as increased manpower needs, can be quantified at this time.

The development programs we have already initiated under the Nunn-Roth-Warner amendment will themselves involve R&D programs of about $3B over the next 5 years. Subsequent production will involve larger sums. These will be matched by allies—so that we obtain needed equipments at less than full cost to our budget. Moreover, the equipment will be common. We expect to initiate more cooperative R&D programs with the funds to be provided in fiscal years 1988 and 1989.

However, the "cooperative programs" element of the budget is not the only component of our budget involved in cooperative programs. While such a funding method has had a tremendous positive effect in encouraging cooperation, it has not and cannot be the only source of funds for cooperation. The annual Standardization Reports show the extent of cooperative development and production undertaken over the past 12 years. We expect to accelerate our search for cooperative R&D so that collaborative programs with our allies will involve approximately 10 percent of our R&D budget by 1994 and approximately 25 percent by the turn of the century. Concurrently, we will push to have our allies accept our designs and we will search out designs of theirs so that they and we can put into production common equipments without duplication of R&D essentially already completed.

There is no question about the need for increased cooperation: flat or decreasing budget trends in every Alliance nation make it clear that the military-industrial effectiveness of cooperation are essential if we are to reach our Conventional Defense Improvement goals. We do not see anything that might remove this incentive to cooperation in the next decade. Furthermore, cooperation is essential to meet the demands for equipment inter-operability, a strong force multiplier.

Senator LEVIN. My last question is this.

The Secretary of Defense issued a directive in June 1985 on the importance of improving cooperation with NATO allies.

Have the uniformed services and the defense agencies reported on the status of the actions that they have taken pursuant to that directive?

Mr. TAFT. Yes, sir. They have been reporting on that through the working group and the steering group.

Senator LEVIN. Would you send to the subcommittee those reports?

Mr. TAFT. Yes, sir.

[The information follows:]

ARMAMENTS COOPERATION

The Services and Defense Agencies have been reporting regularly of their activities in pursuit of enhanced armaments cooperation. The Armaments Cooperation Steering Group, and its Defense Cooperation supporting Working Group, were established specifically to provide vehicles for ensuring enhanced armaments cooperation within the Department of Defense. At biweekly meetings of the Working Group, the members are asked to report on the status of their armaments cooperation activities. As obstacles to armaments cooperation are identified, solutions are devised, the Deputy Secretary is apprised, and actions are taken as required.

These activities have addressed a wide range of issues, ranging from emphasizing armaments cooperation in the reorganization of Department of Defense to streamlining the MOU negotiation process.

Senator LEVIN. Has each of the uniformed services filed those reports?

Mr. TAFT. Dennis Kloske is on the working group and he tells me they are in hand.

Senator LEVIN. If you would submit those reports from the services agencies, we would appreciate it.

Mr. TAFT. Yes, sir.

Senator LEVIN. I had said the last question would be my final one, but I do have one related question.

Has each service established as the Secretary's memorandum directed an education program for their personnel in order to develop and maintain appreciation for the significance of furthering Alliance collective security through armaments cooperation?

Has that education program been established inside each service?

Mr. TAFT. I believe that is in hand. It is in process and not completely developed or in place, but it is on the way.

Senator LEVIN. Would you give us for the record the status of these education programs?

Mr. TAFT. Yes, we will.

[The information follows:]

ARMAMENTS COOPERATION

Education programs for activities relating to armaments cooperation are in place and have been receiving increased emphasis. Most recently, the Department has established 46 manpower positions in the overseas Offices of Defense Cooperation. The individuals occupying these positions include members of the military services as well as civilians positions. Incumbents of these manpower positions must have received specific training from the DISAM school at Wright Patterson AFB and from the Defense Systems Management College at Ft. Belvoir, VA. Specifically, the DSMC has adjusted the curricula of its program management courses to address the consideration of cooperative research and development at every decision point in the U.S. acquisition process. Also included is enhanced material relating to the special problems involved with international program management.

Senator LEVIN. Senator Cohen.

Senator COHEN. I have one final point.

Perhaps, Mr. Secretary, you could just clarify something for the record.

According to the information I have, the Department of Defense's Office of International Acquisition stated that the amount of the military contracts awarded abroad nearly doubled in the past 6 years, going from, roughly $5.4 billion to about $9 billion in fiscal year 1986. I think the highlight of that was the purchase of the French developed communications system, called RITA.

During that same period, foreign military sales by U.S. companies were cut in half, from $14.8 billion in 1980, down to $7 billion.

Is that accurate?

Mr. TAFT. I believe both those figures are accurate. There are peculiar features internal to them. I think a large aircraft sale to Saudi Arabia was included in the last figure that you gave—the AWACS sale.

Senator LEVIN. Mr. Secretary, you indicated that the cooperative projects were limited by dollar availability. Should we read into that, then, that you would support the committee's position to increase your request for these cooperative projects?

Your request was for $59 million; we increased it to $200 million. Do you support that increase?

Mr. TAFT. We have no quarrel with that. I should say that it depends on what you think our request was.

We thought our request was $231 million for the overall program and $59 million for the new.

Senator LEVIN. We are talking about the new. Would you support the increase for the new projects from $59 million to $200 million?

Mr. TAFT. I did not understand that that was what you had in mind.

We will spend the full $200 million, and, as I read the $200 million, it is for new and old. That is what it said in the report. But maybe I am incorrect.

Senator LEVIN. Assuming that the $59 million is for new and that the $200 million is for new, do you support the new figure going from $59 million to $200 million?

Mr. TAFT. We will look to see what our requirements are on new and we will fully fund them. Whether it is $200 million I don't know.

Senator LEVIN. You cannot tell us at this time?

Mr. TAFT. We thought $59 million would do it and $231 million for old and new.

Senator LEVIN. Would you take a look at the $200 million figure. Assume it is for new starts, new efforts, new initiatives. Then give us the position of the Department on it.

[The information follows:]

DOD policy is that new-start cooperative funding requirements are currently $200M annually and may grow to about $300M by fiscal year 1994. The fiscal year 1988 President's budget request of $60M was made with the expectation that it would be in addition to a fiscal year 1987 supplemental request of $60M—a request later to be denied.

We also continue to explore cooperative opportunities in our DOD acquisition approval process. As required by the Nunn amendment, Cooperative Opportunities Documents are circulated for formal meetings of the Defense Acquisition Board.

These contain assessments of the feasibility and desirability of a cooperative development effort with one or more allied nations. Specifically addressed is whether or not the United States should actively pursue allied cooperation on the system under discussion. Through this process, we are projecting the percentage of our budget earmarked for cooperative R&D programs to grow considerably over the next few years.

Senator LEVIN. Would you support setting aside a portion of the fiscal year 1988 balanced technology initiative funds for technology development programs that are pursued in partnership with a cooperatively funded European research program?

Mr. TAFT. I'm not sure of what you mean by that, Mr. Chairman.

Senator LEVIN. Would you support a portion of the balanced technology initiative which we have in the budget going to programs which are pursued in partnership with out allies, providing they act in a cooperatively funded program? In other words, that they act together and not bilaterally.

Mr. TAFT. Yes. A portion, I think, yes, sir.

Senator LEVIN. All right.

Senator Cohen.

Senator COHEN. Nothing further now.

Senator LEVIN. I think what we will do is start with our next panel. But first, since there is no one else here who can chair, we will impose on our next panel and take a 5-minute recess. We have to go to vote.

Thank you very much, Mr. Secretary.

Mr. TAFT. Am I then in the clear here?

Senator LEVIN. You are in the clear, yes. But you are a lot less in the clear than when you walked in. [General laughter.]

Mr. TAFT. Thank you, Mr. Chairman, it has been a pleasure.

[A brief recess was taken.]

Senator WIRTH [presiding]. Ambassador Abshire and Mr. Callaghan, I hope we might be able to proceed. Senator Levin and the other members of the committee will be back shortly. We are having another of what appears to be interminable amendments to the State Department authorization bill, and important ones. The fabric of the Republic is hanging by a very thin thread, awaiting these votes.

Perhaps we could ask the two of you to make your opening statements in whatever form you think will be appropriate. You are familiar with the rules of the committee under which your statements will, of course, be included in the record.

Ambassador Abshire, perhaps we could start with you. Please proceed in whatever way you believe would be most helpful.

Ambassador ABSHIRE. Thank you, Mr. Chairman.

It is a pleasure to be here, and I commend this subcommittee for the work that you are doing.

I am not going to read my statement.

Senator WIRTH. Ambassador Abshire, excuse me. I was just informed by staff that you have all had discussions and that Mr. Callaghan was going to go first and that you would follow him.

Ambassador ABSHIRE. Yes, thank you. I would prefer that.

Senator WIRTH. That is fine.

Mr. Callaghan, welcome and thank you, sir. We appreciate your being here and we have quoted you extensively this morning. We look forward to hearing you in full.

STATEMENT OF THOMAS A. CALLAGHAN, JR., WRITER, LECTURER AND CONSULTANT ON ALLIED AND AMERICAN COOPERATION

Mr. CALLAGHAN. Thank you very much. It is a pleasure to be here. The last time I was here before this committee was 31 years ago. It has been some time.

Senator WIRTH. And things are depressingly the same, I believe. [General laughter.]

Mr. CALLAGHAN. I would like to put my statement into the record, with your permission, together with the enclosures thereto.

Senator WIRTH. It will be included in full.

Mr. CALLAGHAN. I will focus on the problem of structural disarmament because it is really a problem that I think is central to everything we are doing in the cooperation area.

One of the problems we have in this country is what I consider a public, political and military culture that looks upon armaments cooperation as something peripherial, rather than central to our acquisition policies. This despite the fact that our national strategy is collective. In other words, we cannot defend Europe, or the Atlantic, or the Pacific, or the energy mineral lifelines in between all by ourselves.

This is why we have alliances and why our grand strategy is collective. Yet, paradoxically, our resources strategy to use Ambassador Abshire's fine phrase is national. It is autarchic. It is based on self-sufficiency. So you have a collision between our grand strategy and our resources strategy.

This has partly come about because of what I view as a fatal flaw in the North Atlantic Treaty.

The treaty called forth a collective security arrangement for the defense of the treaty area. It failed to provide for a collective defense-industrial effort that would permit us to develop, produce, and exchange efficiently the weapons that are needed to provide collective defense.

Fortunately, following the discussions on the INF agreement, there is political focus here and in Europe on the conventional forces. But the problem we face because of this fatal flaw is that there is no structure within the Alliance to pool allied and American resources.

In other words, there is no resources strategy within the Alliance. Nor is there an adequate resources strategy within this country.

We view cooperation with allies as something apart—apart from the mainstream of our defense acquisition programs.

This leads me now to structural disarmament.

I think nobody has any problem with the disarmament aspect. More and more money in every allied country (including our own) is being spent to produce fewer and fewer weapons, less readiness, and even less combat sustainability.

The reason for that is the increased cost of weaponry. The "Economist" recently noted that in the last 40 years, the cost of commercial manufactured items increased only tenfold, whereas the cost of military manufactured items has increased 100-fold.

This brings me to the structural aspect of the problem.

In the commercial world, we have continental, intercontinental, even global markets. You gentlemen well know they don't work perfectly. But at least they permit you to produce commercial products competitively, to economies of scale that drive down the costs. We don't have that in the military area.

Every country tries to develop and produce itself. You have narrow, national markets, often with "Keep Out" and "No Trespassing" signs at the perimeter. We have this structural disarmament because we don't have a structure for pooling our resources.

We need to begin focusing on optium production. Let me define that term. It was one that was developed over 30 years ago, at the time we were broadening the industrial base in this country.

Optimum production is the minimum amount of money required to produce the maximum number of units in one 8 hour shift, 5 days a week.

Now, what happens when you do not have optimum production?

Let me quote from former commander of the Air Force Systems Command, General Skantze, in an interview that he had in the "Armed Forces Journal." He was being taken to task about why he should not have more efficient manufacturing methods to drive down the costs of the F-15. He said, "The F-15 cost has always been a function of what happened to the production rate to which a lot of your cost is the overhead, and if you only build 48 airplanes, opposed to 150 airplanes, no matter how efficient the manufacturing is, you've got to load the overhead." That is the essence of structural disarmament. It is loading the overhead.

Stretchouts increase the proportion of overhead to military product, so that every funding level below optimum buys more overhead and fewer weapons.

Let me give you just a very few examples.

The Air Force estimates that stretching out the F-15 for just 3 years in the 1970s cost $2 billion, a sum that could have purchased 83 F-15s, more than a wing of aircraft, but merely purchased overhead instead.

The Army estimates that stretching out the Patriot missile and fire units for a similar period in the 1980s cost $1 billion, a sum that could have bought 1,760 additional Patriot missiles.

The House Armed Services Committee reported in 1983 that the proposed reduction of 135 M-1 tanks in the budget they were examining would stretch out procurement and additional 2 years and cost $473 million.

In May of this year, your committee, in its report on the authorization bill, showed the following serious trends affecting our defense budget. During the past 5 years, the report said, weapons had been produced at just 50 percent of efficient production capacity. A fourth of the major acquisition programs during the past 5 years were manufactured at a rate below the minimum economic rate for those systems. Half of the largest 20 weapon systems were stretched out, compared to last year's plans.

Now, what did this cost in money, in lost production? We don't know. In fact, today we have no way of knowing, and I will return to this later.

How, you may ask, could this have happened during the largest peacetime military buildup in our history? The answer, of course, is that it did not just happen. It has been a long time in the making.

In 1981, a Joint Economic Committee staff study made the point that, "Each of the previous five administrations began with hopes of controlling cost overruns and improving the efficiency of defense procurement. None succeeded. Unless the trend is reversed, the cycle of higher unit costs leading to increased budgets and increased budgets contributing to higher unit costs will be perpetuated."

I think it is not exaggerating to say that each administration since Vietnam has inherited a procurement mess. They have tried to solve it solely as a domestic problem. They failed, and then they passed it on to the next administration.

Why? I come back to this question of a public, political, and military culture, that believes we must do everything ourselves, that we must carry all the burdens to the point where there are really no effective burdens that our allies can carry, nor are there benefits that might induce them to carry some of those burdens.

We conduct our national security debate as a people in terms of who is number one—the United States or the Soviet Union. That is a relevant subject for a national security debate in only one area—in the intercontinental nuclear area.

In all other areas we must rely upon our allies. In fact, the only war we can fight all by ourselves is an intercontinental nuclear war, and the danger of that happening depends upon the strength or weakness of our alliances.

The Packard Commission, which looked at this problem of inefficiency in our procurements, condemned stretchouts and said something needs to be done about them. But they stopped at the water's edge. They considered only domestic solutions.

We see a contrast between commercial industry, which has become international, high volume, with lower costs, and the defense industries in every country, which are national, autarchic, low volume, with ever higher costs.

To reverse structural disarmament, cooperation with our allies must become a central part of our acquisition process. It is the only way that we can broaden the market in order to produce weapons at optimum production rates.

We talk about a two-way street. We don't really mean a two-way street. We mean two-way traffic, because we have never built the street. To build the street and to reverse structural disarmament, we need to establish structures within Europe, within North America, and within the Pentagon to carry heavy two-way transportation traffic.

Let me just conclude with the recommendations that are in my statement.

First, and most importantly, we must recognize that there is no domestic solution to structural disarmament. It will continue inexorably, like a metastasized cancer, eating away at the conventional capability of the United States and its allies unless we move to stop it.

Second, make the cost of structural disarmament known so that you people and the public know what it is costing us. This can be done, I believe, by asking the Under Secretary of Defense for Acquisition to cost every project, service by service and DOD-wide in two ways: one, by the optimum production rate and the number of units to be produced at that rate; and, two, by the proposed budgetary rate and the number of units to be produced at that rate. The difference will tell you what are the costs economically and in lost production, of structural disarmament.

Third, the point that you took up with the Secretary, Senator Wirth is that we need to deal with Europe as a collective, defense-industrial whole. We need to work with them to amend the bilateral MOUs which today fragment Europe's defense industrial base and which, as Lord Carrington has said, has wreaked such havoc in terms of structural disarmament on their capabilities to carry their fair share of the NATO defense burden.

Secretary Weinberger offered an umbrella MOU to them in 1985. It was ignored. He offered it again in 1986. It was ignored.

There is, however, a DOD study just launched of what should be the future of these bilateral MOUs, I will hope that they will conclude that we have to move from the bilateral MOUs to a general MOU with the IEPG.

Fourth, the point was made that DOD must implement the Weinberger June 6, 1985 memo Re: education programs. Most of our military do not think first, second, third, or even fourth in terms of cooperation with our allies. And yet, if you go back to General Eisenhower's generation, they studied alliances, they studied the strength and weaknesses of alliances and how to make them stronger. This generation of officers does not.

There is no course in any military or defense college, with one exception, which focuses on cooperation with our allies, and (with no exceptions). There is none that focuses on how, historically, you enhance the strength of alliances. This despite the fact that our entire grand strategy is collective.

Most importantly, I was delighted to hear that you propose more hearings, because we need to educate the American public to what this problem is and to what the costs are of trying to do everything ourselves.

My fifth and last point comes out of a recommendation that was made by the Senate Armed Services Committee staff 2 years ago, namely, the need for mission-oriented budgeting.

The Pentagon is supposed to be producing nuclear forces, maritime superiority forces, projection superiority forces, and forces for the defense of Europe, of East Asia, of Sourhwest Asia. Focusing just on the forces for the defense of Europe, at no time can the Secretary of Defense, the Chairman of the Joint Chiefs, the Congress or the President look at what the Pentagon is producing for that purpose as a coherent whole, nor is there any way in which they can look at the contribution of our allies to that effort as a coherent whole.

I do not believe we are ever going to put this alliance right until we can begin to see what we are producing for a credible, conventional deterrent in NATO and what our allies are producing, so that we can then best determine what each should do without duplication of effort.

Thank you very much.

[The prepared statement of Mr. Callaghan follows:]

Statement of

THOMAS A. CALLAGHAN JR.

Writer, Lecturer and Consultant
on
Allied and American Cooperation

Introduction -- Where Do We Go From Here

Deputy Secretary Taft and Ambassador Abshire can cover the ongoing NATO armaments cooperation efforts (i.e. the Nunn Cooperative research and development program, side-by-side testing, and the Quayle initiative streamlining cooperative procedures) in far better detail than I. Suffice it to say that these initiatives, in which both the Secretary and the Ambassador have worked closely with the Senate Armed Services Committee, are imaginative and creative steps in the right direction.

My focus will be on where do we go from here; what steps should be taken in the near term to build upon these initiatives; what can be done within the Pentagon, within the Congress, within Europe and within the Alliance to begin to produce a credible, collective conventional deterrent at a politically affordable cost.

A good starting point will be to recognize that the United States cannot continue trying to do everything itself; that we must, in Ambassador Abshire's fine conceptual phrase, develop a **"resources strategy"** for NATO. This means we must move vigorously to reverse structural disarmament.

Structural Disarmament -- There Is No Domestic Solution!

Every country in the Alliance is experiencing the disarmament phenomenon of more and more money producing fewer and fewer weapons, less readiness, and even less combat sustainability. The cause is structural. No nation -- not even the United States -- provides a large enough defense market to develop and produce everything itself.

The size of the market determines the price of the product. When the market is large enough, weapons can be produced at optimum production rates. **What is optimum? It is the minimum amount of money required to produce the maximum number of units on one eight-hour shift, five days a week.**

What happens when weapons are produced at less than optimum production rates?

In a June, 1986 lecture in London, then SACEUR General Bernard W. Rogers explained that:

> ....every time we replace an older system, the cost of the newer one has increased by a factor of from three to five. Consequently, we procure fewer and fewer systems as replacements each time, contributing to what is called "structural disarmament".

In May, 1987, NATO's Secretary General, Lord Carrington, told a Capitol Hill seminar sponsored by the EuroGroup and the Center for Strategic and International Studies (CSIS) that:

> National parochialism in the development and procurement of weapon systems have resulted in what can only be termed nonsensical situations, such as four different national Main Battle Tanks in Europe that cannot even fire the same ammunition; or a host of different national tactical battlefield communication systems that cannot speak to each other or even to NATO's own communication system. This is a recipe for operational discord, not harmony. The critical fact is that the Alliance today is spending more and more money to buy less and less equipment, and the spiralling costs of our small, inefficient production runs are threatening to overwhelm defence budgets.
>
> What is particularly ominous about this **structural disarmament** is that it is now striking **with a vengeance** even against the continental-size market of the United States. No wonder then that the same process caused earlier havoc in Europe. (Emphasis added)

Also in May, the Senate Armed Services Committee reported the following serious trends illustrating the vengeance with which structural disarmament is striking the American defense posture:

* During the past five years, weapons have been produced at just 50 percent of efficient production capacity.

* A fourth of the major acquisition programs during the past five years were manufactured at a rate below the minimum economic rate for those systems.

* Half of the largest 20 weapon systems were stretched out compared to last year's plans.

Structural disarmament is a result that is not intended by any of NATO's 15 defense ministries, nor is it correctable by any one defense ministry alone, including the United States Department of Defense. National defense markets are simply too small to permit the continued unnecessary duplication of development effort on the one hand, and the continued production of weapons at less than optimum production rates on the other.

Underlying and aggravating every Pentagon procurement problem is the fact that our domestic defense market (for all its vast size) is too small. It is too small for the number of projects underway; too small for the queue of "new starts" awaiting funding; too small to permit greater competition, a broad vendor base, and the longer production runs that could substantially lower unit costs.

The cause of the disarmament is "structural". The solution is also "structural".

So disarmament will continue until the United States and its Allies abandon the national market structures whereby they provide for NATO's conventional defense. We need a two-pillar North Atlantic Defense Market -- with all unnecessary duplication of effort eliminated -- to provide a large enough market structure to permit NATO's needed conventional rearmament at politically affordable prices.

With the Chair's permission I would like to submit for the record two articles dealing with structural disarmament. The first is my article entitled, "The Structural Disarmament of NATO" which appeared in the June, 1984 issue of NATO Review; the second, an update of the earlier article appearing in the September issue of the Journal of Defense & Diplomacy entitled "Structural Disarmament -- With a Vengeance."

The Cost Of Structural Disarmament: Knowable, But Unknown

With the size of the trade deficit, and strong protectionist pressures throughout the land, I am sure there is nothing the Congress wants to hear less than a proposal to establish a two-pillar military trading structure in which weapons developed and produced in Europe are sold to the United States, so they can earn the foreign exchange to buy weapons from the United States.

But structural disarmament is no small problem, so it will not yield to lesser solutions. Nor is it the kind of problem that American and Allied political leaders can ignore for the simple reason that it will not ignore them. It will continue inexorably -- like a metastasized cancer -- eating away at NATO's conventional capabilities, with or without attention.

If the Congress and the President are unwilling to step up to the challenge of reversing structural disarmament then all our NATO military options must be nuclear. There can be no conventional defense to a Warsaw Pact attack: only early recourse to nuclear war within Europe and between the continents -- or surrender.

Long-term solutions to structural disarmament are not likely until 1989. The close cooperation of President and Congress needed to propose a two-pillar Alliance structure to European Heads of Government and Parliaments must wait until after the Presidential election. But much can be done in the meantime, particularly in the field of military, political and public education.

Not many in the military, in the Pentagon political leadership, in the Congress, and certainly not in the body politic are aware of the enormous cost of structural disarmament. Why should they be? There is no mechanism for systematically identifying the cost, project-by-project, and then adding it up service-by-service and DoD-wide. But it would not be too hard to do so.

A first step would be to determine and make public the military and economic consequences of structural disarmament. This would help develop the popular and political support for the structural changes that will be needed to reverse NATO's unilateral disarmament.

This could be done for the U.S. by the Under Secretary of Defense for Acquisition requiring every major project to be costed at (1) an optimum funding rate and (2) the proposed budgetary funding rate. The difference -- in unit costs and in numbers of weapons to be produced -- between budgeting to schedule (i.e. the optimum funding rate) and scheduling to budget (i.e. stretchouts) is the cost in dollars and in lost weapons production.

These figures should be presented to the Congress and the public so they too may understand the cost of "going it alone" -- of trying to do everything ourselves.

The second step, for our Canadian and European Allies, would be for the Deputy Secretary of Defense to propose at the next meeting of the (so-called) Reinforced North Atlantic Council that Allied Defense Ministers each do the same, and share the figures with one another, with the U.S., and with the parliaments and citizens of the North Atlantic Alliance.

These two steps would educate the military, the political defense leadership, the parliamentarians and congressmen -- and the public -- to the terrible toll that duplication of effort and structural disarmament are taking in (1) diminished conventional defense and (2) wasted national resources. The data would demonstrate the need for transatlantic cooperation, competition and military trade. It would lay the groundwork for the structural changes that American and Allied Heads of Governments and Parliaments will have to address in 1989.

NATO's Collection Of Forces, And The Bilateral MOUs

In 1950 alliance leaders made a distinction between a collective force and a collection of forces.

It is not unlike the distinction that could be made between a military band and a collection of musicians. Imagine a collection of musicians -- purporting to be a military band -- in which each musician determined what instrument he would play, when, to what music, at what tempo, in what key, whether fortissimo or pianissimo as the mood might strike him, all the while reserving the right to march or let others do the marching.

You would hardly call that a military band. Now NATO is not a collection of musicians, but there are many similarities. NATO is a collection of forces purporting to be an alliance. Each of its 15 defense ministries and 44 armed services determines:

- What weapons or equipment it will buy
- When
- In what quantities
- For what military (or export) purpose
- With what level of combat readiness, and
- What level of combat sustainability -- days, or weeks.

As a consequence, NATO's Integrated Military Command commands almost nothing that is integrated:

- Neither its tactical doctrine for the defense of Europe;
- Nor its military equipment requirements;
- Nor its weaponry, its ammunition, its repair parts;
- Nor its war reserve "days of supply"
- Nor its logistics, its communications, its maintenance or operational training.

NATO's governments (American, Canadian and European) have squandered their resources in senseless and unnecessary duplication (indeed multiplication) of effort; in futile protectionism on each side of the Atlantic that leads to an ever widening conventional force gap between NATO and the Warsaw Pact.

NATO's forces, in former SACEUR General Rogers' words could resist a Warsaw Pact attack for only "days not weeks" before having to resort to nuclear weapons. For this the American, Canadian and European taxpayers are carrying a tax burden of $250 billion per year for the defense of Europe.

What can be done about it? Between now and 1989?

Nearly all Europeans and Americans agree that the single greatest impediment to increasing European-North American cooperation is the fragmented European defense industrial base. For 12 years, succeeding administrations have contributed to this fragmentation by dealing bilaterally with each European government instead of dealing with them collectively.

At the same time, each administration (including the Reagan administration) has recognized that not much cooperative progress can be made until the Europeans organize their defense research, development and production, and their industries, on a scale more comparable to that of the United States. The Europeans would agree -- but seem politically unable to do anything about it.

There is, however, something we can do to help them help themselves.

The Europeans' need for larger defense markets to escape the cost of structural disarmament impels them to seek exports, particularly through access to the American market. This we have granted them through bilateral general procurement memoranda of understanding (MOUs) with each European country.

The irony is that these MOUs offer each European government competitive access to the U.S. defense market without even requiring that they grant similar competitive access to one another's markets. This simply does not make sense. Nor does it even make sense from a European point of view, as Francois Heisbourg, the esteemed new French Director of the International Institute for Strategic Studies (IISS) made clear in a Brussels address to the Armed Forces Communications and Electronics Association (AFCEA) in October, 1986:

> It is a paradox that there should be less openness between European countries, than between the U.S. and Europe; the U.S. sells some $3 billion of arms each year to Europe, and the Europeans manage to export approximately $1 billion yearly of defense equipment to the U.S. Setting aside cooperative ventures, which represent a fraction of weapons' procurement in Europe, there is no comparable flow of trade between European countries. (emphasis added)

In 1976 the Culver-Nunn Amendment, noting the establishment of the Independent European Programme Group (IEPG) earlier that year, encouraged the Europeans to organize their defense procurement on a "united and collective basis." The bilateral MOUs fly in the face of that encouragement.

To rectify this situation I would recommend the Pentagon work with our Allies to limit most-favored-nation access to the American defense market (1) to Euro-NATO nations willing to offer competitive access to their own markets to every other European member of NATO; and (2) to European governments willing to transfer their bilateral MOUs to the IEPG. A just-launched Pentagon study of the bilateral MOUs might come to the same conclusion.

Such action would be a necessary first step toward restructuring NATO's collection of forces into a credible, collective and affordable conventional deterrent. With the Chair's permission I would like to submit for the record another article of mine entitled, "NATO's Collection of Forces" which appeared in the July, 1987 issue of the Journal of Defense & Diplomacy, and which deals with this matter in more detail.

The Need For Military And Public Education

The pre-World War II generation of officers was steeped in military history. General Eisenhower, for example, had made a study of the strength and weakness of military alliances. He was well prepared for the problems he would encounter as Supreme Commander, Allied Expeditionary Forces.

The situation is different today.

Cooperation with Allies (or for that matter a sister service) is not high on the list of rewarded virtues in the American military. Devotion to branch, service and budget are the nitty-gritty of every-day military life. They are the stuff on which promotions are based, There is little time or incentive to address the larger strategic issues of making our alliances collectively strong and effective.

For that reason, the study of alliances -- historically as well as in the context of our NATO Alliance -- is not taught as a course in any of the major military or defense colleges. Nor are courses taught on the need for the greatest possible military, technological and industrial cooperation with our allies. The one exception is the Defense Systems Management College in Fort Belvoir, Virginia which does conduct courses on armaments cooperation.

In a 6 June 1985 memorandum calling upon the defense and military departments (and the services) to place greater emphasis on NATO Armaments Cooperation, Defense Secretary Caspar Weinberger called upon each service to "establish an education program....to develop and maintain appreciation for the significance of....furthering Alliance collective security through armaments cooperation."

Thus, there may be a change -- but change will have to await implementation of this provision of the SecDef Memorandum.

Equally important is the need for public education on the relevance of collective security to our national security. This hearing, and this subcommittee, are steps in the right direction. But there should be many more hearings with Allied and American political and military leaders exploring the reasons for the unnecessary weakness of NATO's conventional forces, and the steps that need to be taken by the Congress, the Pentagon, the State Department and the President -- and by our Canadian and European Allies -- to produce a credible, collective conventional deterrent.

Fortunately there is great intellectual ferment on each side of the Atlantic focusing on the need for stronger conventional forces. But that ferment has not yet been converted into an agenda for political action by Allied and American Heads of Government and Parliaments. Many more hearings, and media attention to NATO's problems and solutions could build the popular and political support needed to convert NATO's conventional forces into a collective force.

Mission-Oriented Budgeting

In his 1969 memoir, Present At The Creation, Dean Acheson described the concept of "balanced collective forces" which was approved unanimously by the North Atlantic Council on 17 May 1950. In the end, of course, it all came to naught. The doctrine of massive nuclear retaliation made a collective conventional force unnecessary.

However, as Acheson himself acknowledged, "While we Americans talked of balanced collective forces, our own military planning and budgeting were undertaken aloof and apart from Europe." This problem continues to this day, though Secretaries Weinberger and Taft have been trying to change it.

What makes change so difficult is that nowhere in the defense budget process can the Secretary, the President or the Congress see the American contribution to NATO as a coherent whole. This in turn makes it nigh impossible to line up European contributions -- even if made on a "united and collective basis"-- with American contributions so as (1) to avoid duplication, and (2) to optimize the contributions made by Europe and North America.

How can a problem as complex as NATO's unnecessary conventional weakness be resolved if there's no way to see the problem as a whole?

A proposal that would have the most far-reaching consequences for strengthening the North Atlantic Alliance was made by the Senate Armed Services Staff Report on Defense Reorganization two years ago. This proposal would divide the Pentagon's budget into six major mission areas: nuclear deterrence, maritime superiority, power projection superiority, defense of NATO Europe, defense of East Asia, and defense of Southwest Asia.

This would organize the Pentagon's output the way most corporations are organized, namely in terms of its end products -- of what (in other words) it is trying to produce. For the first time, the President, the Secretary of Defense, the Chairman of the Joint Chiefs and the Congress could see the Pentagon budget in terms of what it is producing in "resources strategy " terms, specifically (for example) for the defense of Europe.

If the Pentagon and the Armed Services Committees were to come into agreement to present the 1989-90 authorization bill in that format, Army, Navy, Air Force and Marine Corps officers would have to begin thinking in terms of what is their role and their contribution to NATO's conventional deterrent and what is the role and contribution of our Canadian and European Allies.

The process of educating the services begun by the implementation of the Weinberger Memorandum would thus be accelerated. But it would not stop there. The Congress itself, the media and the American public would be educated as to what is and is not happening within NATO, and what must be done and by whom to put it right. The idea that the United States must do everything itself would have to give way to a more realistic appraisal of what the United States can and should do, and what its Allies can and should do:

- To redress the conventional force balance in Europe
- To reduce the danger of precipitate recourse to nuclear weapons
- To eliminate all unnecessary duplication of defense industrial effort
- To end structural disarmament by cooperation, competition and intercontinental military trade between Europe and North America
- To share the financial burdens and economic benefits of NATO's defense, equitably and efficiently

In short, it would produce a NATO Resources Strategy that would bind this Alliance together with the pride and respect for one another that comes from common effort and shared achievement.

Senator LEVIN [presiding]. Thank you very much, Mr. Callaghan.

Now, Ambassador Abshire, welcome.

You may proceed as you wish.

STATEMENT OF HON. DAVID M. ABSHIRE, FORMER U.S. REPRESENTATIVE ON THE NORTH ATLANTIC COUNCIL, AND CHANCELLOR, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES, WASHINGTON, DC

Ambassador ABSHIRE. Thank you, Mr. Chairman. It is a pleasure to follow Tom Callaghan and Will Taft. I look upon Tom Callaghan as a prophet, pointing to disastrous trends if they are not corrected, and he has carried out this role now for well over a decade.

Will Taft is confronted with being a strategist and a tactician in a very imperfect world with his guidance we have made great steps toward, many imperfect, but great steps forward, and I think the outlays that have been approved through 1992 on the Nunn programs, for example, reflect this and the work of the reinforced North Atlantic Council meetings.

Last, those in the Congress, beginning in the Senate with the Nunn-Warner programs and the legislation of Senator Quayle, the deep interest of the chairman of this committee, toward what I call creativity, helps us make more out of what we have. Congress has played a key role in this.

You know, Tom correctly bewails the fact that we are not grand strategists. In the Kremlin, they have grand strategists, who look at the correlation of forces. Everything I have talked about here in the past couple of minutes relates to the correlation of forces.

I think Europe, Western Europe, is beginning to wake up. It would be a great mistake to put everybody in Western Europe in the same category in terms of concerns, apathy, business as usual and making aggressive efforts. The Independent European Programs Group is something I was told, when arriving at NATO would never meet at the ministerial level. Well, they have met several times now. They have appointed an independent group that has the freedom of action to turn out a vigorous report. It calls for market forces within Europe and elsewhere.

I give this as one example. All of these recommendations were not accepted. I hope the next go-around that the ministers will accept all of them.

But this kind of thing was not happening a few years ago. They are concerned because if some of the same trends continue, it would spell economic disaster.

I will lead a team from the Center for Strategic and International Studies to Europe over the next 3 weeks. We will predict a long term project that looks toward developing a resources strategy, not just Atlantic, but Pacific, that looks ahead in the defense field. We would like to stay in touch with you on that.

I would like to go back to the colloquy that began with Senator Warner on the double zero option.

I support the double zero option in the larger context of enhancing deterrence; that is restoring flexible response where it needed to be restored, at the conventional level. Those conditions will be the same with or without the double zero option.

Of course, the overlooked fact—and this gets to a particular area of leadership for Senator Quayle—is this. A year and a half ago, NATO, led by Manfred Woerner, was talking about the preemptive capability, of conventionally armed missiles, particularly SS-23s. There is so much focus on the escalation ladder as if we were back in the 1960s looking through a rear view mirror rather than looking through the windshield of the 1900s. Where we don't have superiority at those nuclear levels, the logic has changed.

I think that the horizontal element, the reinforcement of Europe, is absolutely key in deterring chemically capable SS-23s trained on NATO ports of debarkation. It is just another thing that could be devastating.

So, if we give up something, we gain something in a military sense. But the key--and I have said this very frankly to people at the highest level in the administration—the key is that with the double zero option we move forward to a heads of government summit at NATO where there would be a remand for conventional defense initiative number two. That would restore what we already have started. It is to the credit of Lord Carrington that at NATO we got "connected" up what had been, on the issue of defense resources, a disconnected headquarters. The military commands were in good shape but the central headquarters was disconnected.

So NATO headquarters is in good shape. It can take on another initiative. This must be led as much by Europeans as Americans. It should not be Americanized. I am glad to see that they are nervous about the conventional balance. They should have been nervous about it before we even heard of the double zero option. The Soviets have a fleet in being potential in the Norwegian Sea, and they have operational maneuver groups copied after blitzkrieg tactics to strike deep through gaps in NATO before the reinforcement is complete: These are the matters that must be addressed. They had to be dealt with regardless of the double zero option.

If the double zero option had not been proposed dangers of conventional leverage would still exist. By the 1990s this would have given the Soviet Union far greater political leverage than they ever got through their attempts at blackmail with the SS-20 missiles. NATO stayed together, to the shock of the Kremlin.

Now, as I look forward toward an initiative, I would quickly remind you of two charts. They do show up well before the television cameras, I have found. [General laughter.]

Senator QUAYLE. Yes, and that is important. [General laughter.]

Senator LEVIN. If you want to bring them up here where there is more light, I think you can do that, too.

Ambassador ABSHIRE. Thank you. I think they can see them now.

We have to change the mindset as to how we approach a new conventional defense initiative. It is not throwing money and technology at the problem.

If you could have convinced the President of France in 1938 that there was a problem with the defense of France, the military institutions would have invested more money in the Maginot Line and they would not have taken care of the situation on the Meuse at Sedan, where the Germans broke through in May 1940, nor would they have provided better maneuverability.

We in the West have superior resources, but it is going to take more resources. The first requirement is a strategy to better harness those resources. So, whether it is with forces in being, readiness, sustainability, or even armaments you must fill out these points of vulnerability where an opponent will attack. The Germans did not attack the Maginot Line; they attacked the places of vulnerability.

Napoleon attacked places of vulnerability in his battles. This is why inferior forces sometimes win over superior forces.

So an investment strategy, a resources strategy, must provide a better understanding of those points of vulnerability.

Now, to change this into political terms, at NATO the North Atlantic Council meetings and the Defense Planning Committee meetings must move from the general to the specific. We must move to the specifics such as where NATO is going to run out of ammunition on the front. If a country has been unable, as the Belgians, to move forward air defense, let's not let them off the hook, but lets look upon this as a collective problem and not an individual, compartmentalized problem.

This is the beginning and this is why I shy away from saying whether it takes an additional $2 billion any given year or what. The first step is to look at one's resource uses and to be specific on the vulnerabilities, and then develop an investment strategy that addresses these vulnerabilities.

Now, with regard to what we have tried to get over at NATO, I think we have begun to develop something of a resources strategy. This begins with an integrated net assessment of what the problems are.

We have developed, with Phil Karber and others, an unclassified net assessment—not another threat assessment—but a net assessment that looks at strengths and weaknesses in the NATO area. This is because NATO is not universally weak; it is not universally strong; and it is a matter of building upon strengths to do what is necessary.

Taking these critical deficiencies, conceptual military framework puts them into a larger arena where NATO can begin to look 20 years ahead, rather than just six, and this helps discipline our investment. It is possible now to give nations report cards on how they are doing on the conventional defense initiative and on the conceptual military framework. Those report cards should be given out at NATO meetings and not simply glossed over.

So, we can get better planning priorities and goals, coalition solutions where we think more intelligently about our investment, as we have done with the multiple launch rocket system Phase III terminally guided warhead. With this weapon, we put in 40 percent of the cost and the Europeans put in 60 percent. That has been the Nunn program. We need to get a better return on investment. We need to get commonality of weapon systems on the battlefield. We need better technology management.

So our armaments cooperation now, unlike the 1970s, is embedded in an investment strategy. Its discipline will pay off on the battlefield as well as in better economies.

We need to update our crisis management and relate economics to security.

Now, if I could, I would say there used to be a lot of talk at NATO about the "first use" doctrine. There should be a lot of talk about a better use doctrine in terms of our resources. That is the way that we are going to restore flexible response.

Our group at CSIS has finished the first in a series of reports, this team that I am heading up at CSIS, our next step is on improving NATO conventional defenses. There are a number of pages in our report that relate to operational considerations, and I think you have that report.

I am not going to talk about that report today unless you ask. We would like to bring up a CSIS team at a later date to discuss it with you. Soon, we are going to brief our report in Europe.

There is a range of lower cost operational measures that NATO should undertake, and some of these can be done at no cost and be gotten underway.

The second part of our report relates to next steps in armaments cooperation. This agenda of both items should make some of the backdrop for a heads of government NATO meeting. Some of our recommendations are the following.

I think with regard to the Nunn programs, it is important that defense ministries budget more funds, even of a modest nature, for new joint research and development initiatives.

The Germans have had the money. The others have tended to lack the money.

Secretary Taft talked about some of the budgeting that has been done under the programs before us. But for the future, to develop more freedom of action, it is essential that larger budget outlays in this area be approved.

I also support the initiative of Lord Carrington for a NATO armaments planning system. Just as we have force planning, we must do better to link armaments planning with it, because it is essential that armaments cooperation not be accomplished just for the sake of armaments cooperation or good allied relations. It must be accomplished to ensure the best capability on the battlefield and to strengthen deterrence and defense.

Some in our Government were concerned initially that the Europeans wanted to take over the market system when they started talking about planning. That is not what is intended here.

The IEPG report that I mentioned earlier speaks about the necessity of not distorting market forces, and I think this is certainly key as we look forward to our armaments planning. On the national security and force planning aspects, however, there must be a linkup and ministers should report back on this at the December meeting. This will enable us to produce more long term thinking.

It is essential that we have a second push for NATO conventional defense improvements that can even better harness technologies and our more revolutionary technologies to meet the principal threat of the 1990s. The threat is shorter warning blitzkrieg type armored attacks before we are mobilized and deployed.

If the Soviets see us moving this way effectively, because of their high regard for our technological capability, this should give us additional leverage in our Atlantic to the Urals negotiations.

If the Soviet Union, in the wake of the double zero option, sees us going to sleep—and there is a danger of that—then we will have no negotiating leverage. There will be no improvements at the conventional level, and we will go into the 1990s in a very dangerous situation, with the Soviets having far more political leverage because of the military situation than they previously have had at NATO.

Our team also thinks it is very important with regard to the balanced technology initiative to work up an overall strategic design. I had a briefing yesterday by Dr. Ron Kerber and Dr. Snowden from the Department of Defense. I am happy indeed to see the focus on smart munitions.

This is our vulnerability. By not having adequate munitions and not having the proper munitions at different places across the front, a key deficiency exists. For this reason having BTI as a priority action is essential.

I also have followed the work of the competitive strategies exercise at the Pentagon. Dennis Kloske has pushed this attempt to match strengths against weaknesses. I think this is a very important exercise, with not just a conventional payoff, but a negotiating leverage with regard to shorter warning of blitzkrieg attack.

Our team also felt that NATO should convene a conference of leading European and American defense industrial representatives and defense ministry military officials to bring together this creativity, to establish a program which better links private as well as governmental sector technology development with military needs. Also our advance technology R&D projects must be reviewed to identify specific technologies which most easily could be exploited by allies.

It would be well for the Europeans to think of a European technology center. They have the technology base, but they do not pool their efforts and they do not translate technologies into armaments as fast as they should.

On the Balanced Technology Initiative, and the question that was asked of Secretary Taft, I think it is important, if not this year then next year, to set aside some funding for joint efforts. The Europeans now have had so much in their direction, it takes a certain amount of absorption time. But over a period of time we should attempt to involve them directly in some counterpark work in aspects of the balanced technology effort.

I think it is very important that we encourage Trans-Atlantic teaming and industry to industry initiatives, both within Europe and across the Atlantic.

Now let me say, Mr. Chairman, that President Kennedy spoke 25 years ago of a two-pillared alliance. I think that was premature.

But it is not premature today.

I believe that when someone looks at the net assessment which we want to present to you and other members of the committee, any withdrawal of U.S. troops can be seen as a serious mistake. I am for recommitment.

But I am for a recommitment of the Europeans right along with our own, because the big areas of weakness—and this gets to a question that was asked by several Senators—is not the Fifth Corp area. It is not the Seventh Corp area. It is in the Northag area, whose defense involves smaller countries, the Dutch, the Belgians, the Danes—who are hard-pressed economically. We must work toward shoring up those areas of weakness. This must be done collectively using Europe's military-industrial capabilities better and more efficiently. But this must also be linked to the Trans-Atlantic effort for one reason; so that we do not move into a protectionist environment on both sides. Because if we do our defense industries and their defense industries will suffer, and the industrial democracies, willing to support these defense measures, will decline through cynicism even more than today.

All of these things, I would conclude by saying, make up what the Soviet sees as the correlation of forces. The years ahead offer more promise and danger than the NATO alliance has known since its founding.

There is a brilliant man leading the other side. We must get our act together. Armaments cooperation, resources management, and investment strategy is a key part of that because we are superior in this area.

Thank you, Mr. Chairman.

[The prepared statement of Ambassador Abshire follows:]

STATEMENT OF
THE HONORABLE DAVID M. ABSHIRE
CHANCELLOR, CENTER FOR STRATEGIC & INTERNATIONAL STUDIES

Mr. Chairman:

Thank you very much for the invitation to participate in your Subcommittee's investigation of NATO armaments cooperation. This hearing, in the shadow of nuclear arms reduction in Europe, is extremely timely. The pending INF agreement will focus debate on conventional disparities in Europe and ways to redress existing force imbalances. Improving conventional forces, and cooperative efforts to develop, produce and procure armaments for these forces will be initial steps in bolstering NATO's strategy of deterrence.

As you gentlemen know, enhancing deterrence and improving armaments cooperation were high on my agenda while I served as U.S. Ambassador to NATO. Now out government, I am directing a major project at the Center for Strategic and International Studies to suggest a comprehensive defense investment strategy for the United States and its allies. I am proud to be here today with Deputy Secretary of Defense Taft, who has led the Pentagon effort to reinvigorate Alliance armaments cooperation, and Thomas Callaghan, one of the premier analysts of the West's industrial base and common defense efforts.

The pending agreement on the removal of intermediate-range nuclear forces from Europe makes it absolutely critical that the U.S. and the Western European allies move quickly to launch an "Action Plan" for conventional defense improvements.

"Structural Disarmament"

Despite a collective wealth of 2.5 times the GNP, 1.5 times the population, and roughly the same defense investment, NATO has been and continues to be outproduced by the Warsaw Pact in almost every major weapons systems category. Tom Callaghan coined the term "structural disarmament" to describe the West's increasingly poor return on defense investment. Tom's testimony today reminds us that the problem continues to plague NATO. The litany of waste and duplication within the Alliance is well known, as is the cost -- in terms of economies of scale, standardization and interoperability -- of poorly coordinated military research and development.

The West's unilateral industrial "disarmament," severe in years of real defense budget growth, will reach crisis proportions in an era of diminishing defense resources. If improvements in cooperation are not forthcoming on an Alliance-wide basis, we will disarm ourselves through our inability to harness the rising costs of weapons. All NATO members will confront a resources crunch in the near future, forcing them into an "agonizing reappraisal" of their defense investments. A defense investment strategy designed to achieve a better return on that investment is absolutely critical, and arms cooperation is a crucial element of such a strategy.

Erosion of Flexible Response

The problem, of course, is greater than the West's inefficient defense investment. The Soviet Union and the Warsaw Pact have been engaged in a sustained and unprecedented conventional military buildup since the mid-1960s. Deputy Secretary Taft has described the current 2:1 Warsaw Pact advantage over NATO in deployed ground forces. Since 1965, the Warsaw Pact has fielded almost 4 times as many major conventional weapons systems as the NATO Alliance.

As former SACEUR General Bernard Rogers bluntly warned, the Warsaw Pact's conventional strength would force NATO to resort to the threatened first-use of nuclear weapons in a matter of days, not weeks. The advent of superpower strategic nuclear parity, or, as some would have it, U.S. inferiority, has called into question in the minds of some the continued viability of NATO's declared strategy of flexible response and the continued U.S. commitment to "extended deterrence."

Plainly, the heart of deterrence in the 1990s will depend more and more on NATO's conventional forces. Dramatically improving conventional forces is the way to regain the flexibility of flexible response, to lengthen the life of nuclear deterrence so that any "first use" decision could be made much later than it would have to be made today.

How Can NATO Do It?

One key to successful NATO efforts to improve conventional defense capability will be effective cooperation in developing, producing and procuring common weapons systems and equipment. And the key to better armaments cooperation, as Deputy Secretary Taft has described, is the coordination of Alliance defense industrial effort at at the early stages, in research and development. The recent agreement with the Federal Republic of Germany to produce jointly the Rolling Airframe Missile (RAM) for both our navies is an important and symbolic milestone in NATO efforts to manage common defense investment better.

Armaments cooperation is the very core of an Alliance defense investment strategy. When I testified in January before the full Armed Services Committee, I said NATO was taking strides toward such a strategy. As you have heard today, the Alliance is moving rapidly to target pooled defense investment to areas of

NATO's greatest military need. U.S. and Allied commitment to joint research and development programs is strong and growing. The Nunn-Roth-Warner and Qualye amendments created not only the legislative and financial foundation for cooperation, but the very cement for efforts to build an Alliance resources strategy. The success of the Nunn Amendment programs has been tremendous, and due in large measure to the real partnership between Congress and the Pentagon.

While NATO, the Pentagon and Congress can be proud of recent accomplishments, more can and must be done to push armaments cooperation ahead. A window of opportunity exists for a broad, new Alliance Conventional Defense Improvement effort. Improving armaments cooperation, the core of NATO's evolving "better use doctrine," will be critical to the success of such an effort.

The first report of my CSIS project, NATO: Meeting the Coming Challenges, contains a series of suggestions for expanding Alliance armaments cooperation efforts. I would like to briefly list some of our most important recommendations in the arms cooperation arena.

NATO Armaments Cooperation: The Next Steps

NATO's first critical task is to reinforce the progress already achieved by Alliance cooperative research and development initiatives.

* European defense ministers should request modest additional funding to pursue new joint R&D initiatives under the Nunn-Roth-Warner framework.

*NATO ministers should support Secretary General Carrington's call for a NATO Armaments Planning System.

I believe with Lord Carrington, that the time has come for NATO to link force planning with armaments planning. A mechanism to generate common Alliance armaments-related force goals would certainly open new horizons for cooperation. NATO member governments have submitted their initial reactions to Lord Carrington's suggestions, and I hope the defense ministers will strongly support the initiative during their December meeting.

A "second push" for NATO conventional defense improvements must also seek to translate the West's advantage in "revolutionary" technology to the battlefield. Coordination of Alliance advanced defense research will be critical to this effort, and we have recommended the following:

* The Pentagon must propose a strategic design for future research efforts under the Balanced Technology Initiative.

Let me add here that I have just received an excellent briefing on the Initiative from Dr. Ronald L. Kerber, Deputy Under Secretary of Defense for Research and Advanced Technology, and his Special Assistant, Dr. William E. Snowden. I am quite impressed by the current focus on "smart" munitions that marks BTI and responds to what we have identified as one of the most serious problems facing NATO.

* NATO should convene a conference of leading European and American defense industry representatives and defense ministry and military officials to establish a program which links technology development more closely with priority military needs.

*U.S. advanced technology R&D projects must be reviewed to identify specific technologies which could be most easily exploited cooperatively with the Allies.

*European defense ministers should move to establish a jointly-funded European Technology Center.

*The U.S. should set aside a portion of the FY88 Balanced Technology Initiative funds for technology development programs to be pursued in partnership with a commonly funded European research program. If short lead time makes it difficult for our Allies to participate next year, we should retain this as an important, longer-term goal.

*A NATO conference to address the broad agenda of technology security and Alliance defense trade should be convened at the soonest possible date.

In this context, I am very encouraged that the Pentagon has begun its own comprehensive review of the international armaments market and NATO trade relations. Let us now in the Alliance build upon such efforts.

A primary goal of any strategy to establish greater armaments cooperation must be the creation of an environment conducive to industry-to-industry initiatives. Reducing impediments to even greater international industrial cooperation and increasing industry input in government-to-government cooperative negotiations should be priorities for NATO defense planners.

A crucial no-cost first step to unleashing private industry cooperative initiatives is a thorough review of U.S. government technology export licensing procedures.

As the European allies move toward the inevitable merging of defense aquisition and the creation of a common armaments market, a forum must exist for defense industry -- European and American -- input into the process.

We have recommended that the NATO Secretary General request a report from the Chairman of the NATO Industrial Advisory Group on measures needed to enhance significantly the Group's effectiveness.

Our recommendations for improving Alliance armaments cooperation are part of a comprehensive package of suggestions for short-term, relatively low-cost measures to improve NATO conventional defense capability. I believe it is essential for NATO to establish a credible post-INF conventional improvements effort. An Alliance heads of government Summit meeting is needed to establish a common "Action Plan" to achieve the goals of a second Conventional Defense Improvements effort.

A premise for many of our specific recommendations to enhance conventional defense and deterrence is European leadership. A rationalization of trans-Atlantic industrial activity and opportunities for widely expanded cooperation must be built on a stonger intra-European foundation. Twenty five years after John F. Kennedy called -- prematurely -- for a two pillared Alliance, Western Europe is in position militarily, politically and economically to assume greater responsibility within NATO. In sum, we must now turn to our European allies to discover if the will to create a non-exclusive, Alliance armaments market exists.

U.S. policy in the coming months must attempt to encourage our European Allies to accept a greater role in NATO, while at the same time reassuring them of our continuing commitment to our common defense. By the same token, it is essential that the President and Congress work hand in hand and form a bipartisan, partnership in support of the Alliance, and the better use of the superior resources of the West to enhance deterrence.

Senator **Levin**. Ambassador, thank you.

Thank you both for your very compelling presentations. They are extremely helpful to this committee.

We are in the process of holding a series of hearings in the conventional area. Obviously that is the jurisdiction of this subcommittee. We will be getting into the conventional balance, on which you and your colleagues have been working so well, Mr. Ambassador, into conventional arms control issues, conventional improvements issues, and a whole host of issues relating to conventional forces. This is part of that series of hearings, as you know.

Ambassador Abshire your point, is a very strong one in terms of Europeans functioning better together. You are saying, basically, that you think there is a second pillar there now, though 25 years ago, perhaps there was not.

It seems to me, though, that it may still be premature to talk about a second pillar, for the reasons which you have given here today and in other places.

Our allies cannot even publicly discuss that Northag area that you talked about because of the political embarrassment back home when talking about the Dutch and the Belgians being the weaker link in that chain. Our allies cannot even discuss it.

NATO does not talk about that publicly. They don't analyze it publicly. They do not confront it publicly and forthrightly because it is a politically sensitive issue. It is not the central part of that chain which is the weakest link.

We have the strongest NATO forces in the least likely area of attack. We have the weakest forces, which you cannot talk about publicly in Europe, in the most likely area.

Why can't we talk about it and do something about it? There are political reasons for being unable to shore up, as you put it, that Northag area. The only reason we do not do it is political. It is not a shortage of resources, although we do have some shortages of resources. But you cannot move troops from one area to another for historic, cultural, and political reasons.

So it is not just that we do not have interoperable radios among NATO allies. We cannot even talk about some of our deficiencies publicly because of political reasons.

And I do not see that we are going to be able to really break out of this in a significant way without applying some well intended pressure upon our friends.

I know that we don't like to talk about it because we don't like to talk about pressure on allies. But, again, we do that in the economic realm. We negotiate with each other. Our best allies enter into negotiations with us. The NATO allies enter into negotiations with each other in the Common Market area. Those are hard-bitten negotiations.

It seems to me that if we are going to force some change in the area of weapons procurement, so that we are not buying 11 antitank weapons, we are going to have to apply some well intended pressure upon our allies, and they on us. The two-way street applies in the area of pressure, too, not just in the area of purchases. I think we have to understand that.

Unless they can point out to their people, to some pressure coming from outside, they are going to have problems politically in selling it, because we all have parochial and limited interests, those of us who represent people. We ought to face those honestly. We have to give up something to get something, and what you have to give up has to be pointed out to your constituents in a democracy so they realize that if we are going to make some progress, we are going to have some pain as well as some progress in the process.

One of the things that Mr. Callaghan proposes, Mr. Ambassador, is that we give our NATO allies access to our defense markets, to sell here, only if they grant the same access to each other, and only if they turn their bilateral agreements with the United States into umbrella or multilateral agreements. There is some real pressure there that he is proposing, and I hope I am representing your position right, Mr. Callaghan.

He has proposed that we put on some real pressure, that we basically say you are not going to have that kind of access to our markets unless you reduce barriers to each other, and unless we enter into some multilateral agreements with you in the area of arms procurement and rip up some of the bilateral agreements which have "balkanized " this whole system.

Can you comment on that kind of pressure specifically, and if not that kind, if that is too heavy-handed or counter-productive or whatever, in your view, what kind of more pointed pressures can we place upon our friends, hopefully which will not be misunderstood, hopefully which will be presented in a positive way, but which can be finally laid out so that they realize, as our people sooner or later must realize, that we are inefficient in the area of weapons procurement.

The Warsaw Pact does not face those inefficiencies as far as we can tell. And I do want to ask both of you about that, whether they have a structural disarmament problem inside the Warsaw Pact. But, as far as I can tell, there is not much of a problem there. They do not have to worry about economies of scale. They do things a lot more coherently because they don't have a market—they don't have a political problem, which balkanize the process.

So my question, first to the Ambassador, is what do you think about Mr. Callaghan's proposal in terms of conditioning access to our market on the reduction of barriers, and, if not that, what pointed pressures would you be willing to place upon our good friends?

Ambassador **Abshire**. Mr. Chairman, I would like to take your basic question on pressures first, and then comment on the proposal.

I saw what could be done through NATO machinery when you make it dynamic. It can rust, and it was rusting at the headquarters.

There are two things that a lot of countries would not have done on their own that happened, one that shocked them. What shocked the Kremlin, apparently against everything they had been told, was the INF missile deployment. There were five basing countries, and two had enormous political problems in deploying, but they did it.

Now why did they do it? Ultimately because of the pressures of "the club," and we were meeting practically daily, ambassadors, and those pressures became so great that it enabled politicians to do what they could not have done otherwise because of that.

Now I am not saying this happens all the time. I don't want to be misunderstood. It's a dramatic example. Gene Rostow says it is easy to the victory of the Battle of the Marne in 1914, it so set back the Kremlin in what they thought would happen with these decadent democracies.

The conventional defense initiative, number one, if we had just sat back for this to become a grass roots effort, it never would have happened. But there were talks at the very highest level of our Government, ultimately between the President and Chancellor Kohl, on what had to be done. It would have been bad for us to lead it. The Germans got into it as much as us. Originally they were not going to that much, but they did.

We ended upon with a superb leader of it, Manfred Woerner, who probably will be the next Secretary General, who was able to give it an extra conceptual framework.

So here are two cases of the Alliance doing something that would not have normally done.

Now, the Independent Program Group, a European entity, which is now talking about getting a staff and a Secretary General, is trying to take on things that politicans would not have taken on before.

It would be out of place for me to lecture you distinguished gentlemen on what enables a political leader to do things that are not popular. They have to be given a vision, they have to be given a way, they have to be given a rationale and some very compelling reasons. We are beginning to get those now in the European picture on getting their act together.

The American role in that is important, and the citing of Rick Burt was a good one, and Arthur Burns before him, who speaks out, and bluntly. That is an important process.

I think I did that in the circles at NATO.

The Congress, you gentlemen who are interested and who have committed your time, so many of you who have made these trips to Europe—for example, the Geneva Advisory Group, when I was there, would come to NATO or would do something with NATO when they were going over to Geneva, and would sit down and talk the realities to Europeans. That was a very important element that I used all the time. The fact that you have moved both on what I call the creative level, with some of these amendments, and the level of political realities, of speaking of the attitudes of the American electorate, those two approaches are key.

So I would, in terms of Europe's progress within itself, stoke those fires that are now underway, to do what Tom Callaghan wants, rather than a more mechanical way at it.

Will Taft was here this morning. We wanted to get armaments cooperation in the NATO framework above the level of the professional armaments directors that meet. I went to one of those ambassadorial lunches and I said I am going to have my Deputy Secretary of Defense with me at the next meeting. But none of the rest of them wanted to do that.

We wanted to get it at the political level. The French were the last holdout. So we created this reinforced North Atlantic Council

Meeting with the French present, the French Deputy Defense Minister. They don't have just one deputy, you know.

So we were able to elevate the process which meant that Secretary Taft who is up here testifying before committees could come over there. He carries pressures and speaking as a political person, as compared to a bureaucrat at a lower level who does not adequately speak to those pressures. The Europeans knew that on the Nunn-Warner-Roth programs and also in response to the Quayle legislation, if they were not responsive, that window of opportunity was going to be shut. But it took people who were dealing with this Congress to say that to them authoritatively.

So, consequently, they began to reorder their budgets in a way they would not normally have done under "business as usual," because the clock was ticking and the deadline was there.

Senator LEVIN. What about Mr. Callaghan's specific proposal?

Ambassador ABSHIRE. I would do it through this kind of process, rather than some kind of legislative device of that nature.

I agree with his intent. But I have been out there on the front line and I have seen what we can get going, using pressures, but using them not by getting at one mechanically, but bringing more pressures to bear throughout that whole process.

Senator LEVIN. Don't you at least have to have the threat of those mechanical pressures, as you put it, out there in order for the rhetoric, the diplomacy and the personal presentation?

Don't you have to be able to point and say look, this is what the Congress is considering? Don't you have to be able to point to a Nunn amendment a few years back, and say even Senator Nunn is talking about pulling a few troops out of Europe over time unless you folks do more? The Nunn amendment produced some shelters for aircraft.

Isn't it useful to have some pressures, mechanical, as you put it, at least being proposed in order to gain their attention, when you go the diplomatic route that you are talking about?

Ambassador ABSHIRE. No.

I'm really not talking about the diplomatic route because there are pressures in everything that I have described to you.

Senator LEVIN. But they are all carrots. There are no sticks.

Ambassador ABSHIRE. No, because they know what is going to happen on this side. They know what is happening on their side. In Senator Nunn's earlier case, we worked with him on a range of drafts on the Nunn amendment. I would not want to speak for him, but I think I am safe in saying that he originally was looking at a way of getting the Europeans to get together more and then come at their cooperation with us.

Van Houwelingen, who headed the IEPG, wanted to pose an unbrella MOU. The larger countries would not go along with that. That was the problem on that. We should come to that, and I think we will come to that.

I think these things should be pushed, and I think that in terms of really pooling to encourage a joint technology center, a research and development pooling, an advanced research project agency that does not get into cartelization, those are the kinds of things that need to be done, and where we ought to be working with them. I think U.S. legislation that points in that direction is very helpful.

Senator LEVIN. Thank you, Mr. Ambassador. I probably have gone way over my time.

Senator Quayle.

Senator QUAYLE. Thank you, Mr. Chairman.

Mr. Callaghan, on your discussion about the optimum rates and making sure that we have a budget that would support those efficient production rates, basically I understand what you are saying, much of which was in the Packard recommendation, is that we need to look at potential multi-year procurements, that we can't have the budget fluctuation and changes, particularly as you quoted General Skantze saying that the reason we are costing so much more in F-15s is because we are purchasing 40 instead of 180, or whatever the number.

I certainly concur with that. It has been stated, unfortunately, and I think people on the committee understand it. We are faced time and time again with budget problems and political problems. But the more that that is said, the better it is going to be because at some time maybe we will, in fact, begin to stick to some sort of stability in budgeting.

There are tremendous costs of structural disarmament, the process. That is certainly part of it, and I think it is an important part of it.

I gather from what you said, and correct me if I am wrong, to get more efficiency, as far as opening up the United States and opening up NATO countries, perhaps what we ought to be doing is they ought to be buying more of things that we produce well, and we ought to be buying more of things that they produce well. I sort of gather that was your bottom line.

Do you have a couple of examples that you might be able to throw in there, on what they ought to be buying of ours or what we ought to be buying of theirs?

As I understand it, you are not talking about a joint cooperative venture. You are talking about things that are basically R&D, manufactured and produced in this country, and the same would be in NATO.

Am I correct in that——

Mr. CALLAGHAN. Yes, sir, you are.

Senator QUAYLE [continuing]. In understand the basic thesis?

Mr. CALLAGHAN. You are.

Senator QUAYLE. Could you give us a few examples?

Mr. CALLAGHAN. It is better to look back, because they are the better examples, than to look at what can be done now.

Let me first start historically.

In 1957, when Sputnik went up, we got very concerned about the European defense-industrial base, its technological capability. We went there with a number of so-called NATO co-production programs—the F-104, the HAWK, the Bull Pup and the Sidewinder.

Now, the purpose of this co-production was to upgrade the European industrial base and with President Eisenhower present, Secretary Dulles told the Europeans that when you do this, we will buy weapons from your industrial base.

We have not, and that rankled.

Now come forward to 1965 with me.

Secretary McNamara, faced with a very serious political problem in Europe, with concern particularly in Britain that they were buying aircraft from us and we were not buying any weaponry from them, held a press conference in London with Defense Minister Healey. He told the press I am going to the Defense Planning Committee meeting in Paris tomorrow and I am going to propose that we establish a common market in arms. This was picked up and front-paged in the press in London and here in the United States.

He got off the plane at Orly, and they had another press conference for him. He confirmed yes, I'm going to make this proposal tomorrow in the Defense Planning Committee meeting.

He never did. That also rankled the Europeans.

Now let me look at another part of this problem.

In 69 years, we have purchased only one combat weapon system produced abroad for our own forces—the AV-8 Harrier.

On the other hand, I could not begin to list all the complete combat weapon systems which our allies have bought from us—such as the F-4s, the C-130s, the M-60s, M-113s, missiles of every variety, and that too rankles.

Now, when I talk about putting pressures on the Europeans to get together, I am not talking about doing it to them, but doing it with them.

What I am saying is that if you want to get them to get together, then really mean it. We have got to say if you will get together, we will buy from you, we must not just buy from them as subcontractors, but complete systems from them because that is the only way that they can afford adequate defense, and that we can afford adequate defense.

We cannot continue to try to develop and produce everything ourselves.

Now, in that kind of two-pillar defense market, what you would have is every subcontractor on our side and every subcontractor on their side having the right to bid to prime contractors. This is what Secretary Weinberger is trying to do on their European fighter aircraft, let our people bid to you, and vice versa.

They would take that on immediately if we were to go a step further and say we are producing several aircraft in the next decade, and you will be producing at least two or more aircraft in the next decade—let us harmonize those aircraft. Let's let the prime contractors in Europe and in the United States buy the best that is available and incorporate it in those aircraft, and we will buy from you and you will buy from us.

Why if we were to do that they would get moving together so fast, you cannot imagine.

That is what is missing—we are talking past each other.

Let me take us now to Aesop's fable about the man with the overcoat and the cold north wind because it deals with this burden sharing thing. We have been trying to get them to carry the burdens of NATO defense by taking the cold north wind approach.

I say in our own interest that we need to take the warm sun approach.

We must say, if you will carry these burdens, we will buy from you and you can buy from us.

Lastly, let me give you a few examples of just what the Europeans are thinking. This is from the IERS report, "Toward a Stronger Europe." It expresses both the good and bad of this problem.

They are talking about the fact that the European manufacturers have sought exports in order to try to reduce their unit costs by broadening their market, but they said this, that exports are drying up. As weapon unit costs increase European governments are forced to consider purchasing from the United States "in the interest of economy."

They recognize, however, that to do so, exports employment in Europe, deprives Europe of technology and prevents their military staffs from acquiring equipment specifically suited to European operational units.

They also say, and this is a central point, that nations, meaning European nations, "should be willing to contemplate cooperation within Europe as a first course of action."

What I am saying is that decades of our not buying from them have begun to come home to roost. They are also beginning to think of going it alone also. And that will be a catastrophe for this alliance.

We are the only ones that have a market large enough to say look, let's change the game: we will buy from you if you organize so that you can develop and produce efficiently.

Senator QUAYLE. I guess this would be the question I would ask Mr. Callaghan and also Ambassador Abshire: should we focus more on the joint cooperative projects, which has been something we all have been very interested in, particularly this committee, or should we focus more on purchasing, which I think you are saying, more off the shelf types of things that are already produced? I suppose your answer could be both.

Mr. CALLAGHAN. Both.

Senator QUAYLE. I am wondering. Our focus has been on cooperative development, particularly in the R&D and particularly looking at joint projects. Do we separate the two out? Do we need to do more of one and less of the other?

Is the answer both, that we need to do both? You would probably say that we need to do more off the shelf?

Mr. CALLAGHAN. No, I think we have to do both, sir.

We talk about, say, interoperability and standardization. Interoperability, is what do we do with the mess that we have. Part of what we do to achieve interoperability is buy off the shelf to reduce that mess. And part of what we have to do is try to harmonize and make interoperable what we already have.

But to prevent that mess from happening again, we have to start at the R&D level and get projects that are completely harmonized, so that there is commonality among them.

So you have to work at both levels. If you work only at the R&D level, you are looking at a time lag of about 12 years before you get output, before you get deployed output.

So you have to work at both levels.

There comes a time, 12 years later, when it is a constant all the way through, from development to production.

Senator QUAYLE. Thank you.

Mr. Ambassador, would you care to amplify on that?

Ambassador **Abshire**. I agree with what Tom Callaghan said.

I think the Nunn-Warner-Roth amendment, the drama, was so focused on the cooperative programs that the other part of that did not make the publicity, but the side-by-side testing provision, which was the other end of the spectrum, was there and has gone forward.

Now, sometimes when these things turn out to be unpopular politically because of the constituent situation, we can run into problems. But the program is there and it is both ends of the spectrum.

By the way, I would very much agree with what Tom Callaghan said in the first part of his statement. I am concerned that an amendment should not unintentionally disrupt the cooperative programs that depend upon the Europeans getting their market together. This in part, involves the Economic Community and some reforms that are being undertaken there as we look forward to 1991 and 1992, and gives us another major opportunity in this field.

Senator **Quayle**. Without doing disruption to the cooperative efforts, would you encourage us to focus and to talk more about off the shelf purchases, both ways?

Ambassador **Abshire**. Absolutely. That is just as much a part of everything that I say as the cooperative programs. It is at the beginning, with research and development, and then it is also at the end. If you get the beginning straightened away, which will have input farther down the line, and there is a great pooling among allies at the research and development level, this is also going to lead to better and more competitive off the shelf purchases. Competition in all of this is key.

What we do not want is any kind of protection and solutions that are uneconomic and not competitive.

Senator **Quayle**. Let me switch gears just a second and talk about a specific joint program, in R&D, which would also go to what I perceive are one of the vulnerabilities that the NATO alliance has. This is on the extended air defense, particularly in the post-INF environment, where you are going to go down to the zero-zero level, or double zero, however you want to call it.

In the Senate version we have $100 million, I think, for the joint cooperative effort to look at the problem of extended air defense.

I wonder if you first might give us your net assessment in a post-INF environment of air defense, and the importance of continuing this as a cooperative effort to fill what I perceive to be quite a vulnerability, which continues in the NATO alliance.

Ambassador **Abshire**. Well, extended air defense and the work that has been done by the NATO Air Defense Committee is a very key element in looking forward to the vulnerabilities of the 1990s. As we took extended air defense and moved it into the missile area, where we were facing some of the missiles that now would be taken out, the big need at NATO was to agree on a common threat assessment. That took time because you get into differences of view, some of which I think are motivated by service backgrounds within NATO.

When I left—and I am not up to date on what has happened in the past year—considerable progress was being made in getting together on this.

Now, we are dealing with large amounts of money and the efficient use of that money is important. Also we need to consider the particulars of air defense, getting back to the chairman's comment for example, Belgium's failure to move forward to the Patriot.

So the particulars, as well as the general requirements, must be faced. It is a priority program at NATO and it must be.

Your support of it is key.

I have been given a note that the threat paper is due to ministers in December, and a countermeasures paper in the spring. If you are going to spend your money and direct your technology wisely, you really have to get agreement on specifically what the threat is and how to deal with it.

So I think we will be in very good shape to move forward with the December report and with the spring paper, and I am happy about your concern on this issue.

Senator **Quayle**. Let me just ask one final question on cooperative arrangements and getting smartness and enhanced capability in our conventional weapons.

If you look at the European, the MSOW, the modular standoff weapon, their version of the cruise missile, that they are proceeding along the track, one of the things that the committee and I have been interested in is how we can improve our accuracy on the cruise missile, particularly getting it down to—I think it was Under Secretary Taft who put out the charge to try to come to zero CEP.

Looking at compatibility, enhancing conventional capability, looking at where the Europeans are going in their MSOW, the cruise missile, and we are looking at our advanced guidance and accuracy system, do you see that this might be an area where we could go back to say that our potential increased accuracy in this would be very, very advantageous to what the Europeans are doing in their cruise missiles, and they might be able to share or maybe be able to purchase some of these advanced guidance systems within our cruise missiles that we would be, in fact, working on? Furthermore, would that not advanced accuracy in our conventional cruise missile be a major help to conventional deterrence in the long run?

Ambassador **Abshire**. Absolutely.

I think we now have at NATO headquarters a process, if we drive it—if we don't, it will snooze off—but if we drive it, and if we move things up to heads of government meetings—and I don't say that they are going to discuss every detail—that further drives priorities and it brings finance ministers and others into the complex. If we intensify our discussions on how to develop an investment strategy vis-a-vis the threat, and make heads of governments—Margaret Thatcher, Chirac, Kohl and others—more familiar with the specifics of this, with the trade-offs, with how we can think smarter on these resource problems, I think we will find a lot of ways, and you have just identified one, where we can achieve things at the political level that we have not achieved before.

When you look at the ministers of Europe down the street from me, when I was at NATO, in Belgium, meeting on EC matters, why they would haggle for several days. That is what we need, that kind of homework—not ministers reading prepared statements, but really looking at the tradeoffs and the possible combinations so that they do not see this effort as just throwing more money and technology at a problem which they think they cannot sell to their people. We are really going to think smarter with the options that we have, and do this Trans-Atlantic as well as in Europe. If so, I think we can have a quantum breakthrough in what we are capable of doing.

But right now, we are at a crossroads. We are either going to go up on this or it is going to snooze off downwards, particularly in an environment where we have a leader on the other side who may succeed in diminishing the perception that there is any deficiency in ourselves that we have to deal with.

I think you have pointed out a very good area.

If we fail to meet the air defense problem, we are going to magnify the situation in the 1990s where whether or not reform fails in the Soviet Union, and I think it is going to fail even a more liberal Soviet Union will still feel that it can use military pressure to get us back out of Europe and better shape the economic framework and the technology flows. They already have a little extra military leverage to accomplish this with the conventional forces that they have—I don't mean that they plan to go to war but that the political derivate of this military pressure is going to be a far greater threat than the nuclear threat which is stalemated.

The failure to face these things and follow up on the momentum that we now have going will come back to bite us, and you will end up with a NATO alliance a la carte. We could even return to the situation of the summer of 1914, if we are not careful.

Senator QUAYLE. Thank you, Mr. Chairman.

Senator LEVIN. Thank you, Senator Quayle.

Mr. Callaghan, you have proposed that NATO basically sit down and figure out what our future needs are and allocate them.

Mr. CALLAGHAN. I proposed a little more than that, Mr. Chairman.

Senator LEVIN. I did not mean to say that that was all you proposed, sir. But that was part of your proposal, that NATO attempt to allocate the production of systems that we are going to need in the future so that we can buy the ones that are produced in Europe and Europe can buy the ones that are produced here.

Mr. CALLAGHAN. Yes, in the long-term. But the main thrust of my statement was what can be done between now and 1989.

Longer-term, I think we have to correct that flaw in the North Atlantic Treaty. We have to get a new agreement, a parallel agreement, that creates a collective defense industrial effort on a two-pillar basis.

Now that cannot be done without the active involvement of the Congress and the President of the United States. There has to be a concurrent resolution coming out of the Congress which sets the main parameters of how that structure will work, and then you begin negotiating the details.

Senator LEVIN. NATO being a long-term structure does not change my question. My question is to what extent is your proposal deviation from a competitive environment or a market environment?

Mr. Callaghan. You would do the allocation competitively wherever you can. There is going to have to be some adjustment in order to get some kind of balance.

It is less important that you have competition at the prime level—much of the prime effort goes into integration, management—than that you have the widest possible competition down through the tiers.

Also, not all major weapons could be produced in Europe or in North America. Let me take tanks, for example, which is a matter of interest to you.

If we were to agree on one tank in NATO, there is not sufficient capacity in all of Europe or in all of the United States to produce all of the tanks that would be required at any reasonable period, so that you would have, at a minimum, two prime contractors on each side hopefully selected competitively on a 60/40, or whatever, basis and you would have two or three or more, subcontractors as you go down through the tiers also selected on a competitive basis.

Senator Levin. Is there any mechanism in NATO that you know of that is looking at this kind of long-term process and allocation?

Mr. Callaghan. Not that I know of, sir.

Senator Levin. Ambassador, do you know of any process inside of NATO that is looking at that process which was just described by Mr. Callaghan?

Ambassador Abshire. Lord Carrington, in introducing his call for long-term armaments planning to parallel and go beyond the force goal planning is trying to get at this problem.

The larger problems that Tom Callaghan talked about have to be—and he would be the first to agree—addressed at the highest political level. We got it up to the Taft level. We want to keep it going.

Senator Levin. My question specifically is do you know of any mechanism in place in NATO which is trying to define a process by which countries will be bound, after a competitive process, to go along with the outcome of that competition, buy from abroad, whether it is there from here, or here from there? Do you know of any such thing?

Mr. Callaghan. [Nods affirmatively.]

Ambassador Abshire. No. There is no binding——

Senator Levin. It would have to be binding, I presume.

I see Mr. Callaghan shaking his head.

Should there be such a binding process put into place? Should NATO be looking at a way to have a competition—and I am talking now about long-term—and then a binding commitment to either buy there from here or buy here from there?

Ambassador Abshire. I would favor, and I think it has to come with the next president and the next Congress, a basic evaluation of where we stand on NATO and then a move forward with the two pillar, and out of that the development of a new compact that would be along, in general, such lines.

That cannot be done bottom-up. That has to be done top-down, and it has to be done in a way that political leaders understand the advantages of moving in these directions, so that they can overcome the special interests that would thwart that move.

Senator Levin. Mr. Callaghan has testified today that more and more money is being spent for fewer and fewer weapons over time. He has done an analysis which shows that as the years have gone on, we are actually getting worse rather than better, in terms of the efficiency and the economy of scale.

I am wondering whether you would agree with that.

Ambassador Abshire. Absolutely.

Senator Levin. I wonder, Mr. Callaghan, if you would supply to the committee whatever backup material you have on just that very narrow point, comparing now to 5 years ago, to 10 years ago, to 15 years ago, to 20 years ago. You said, for instance, there is 100X military versus 10X commercially—you used that as an example, military buys versus commercial buys and efficiency over time.

Can you compare for us "over time?"

Mr. Callaghan. Oh, yes, for example, 3,000 aircraft per year in the 1950s, 1,000 per year in the 1960s, about 500 in the 1970s, 300+ in the 1980s.

Senator Levin. That is one example. That is an anecdotal example, which is valuable.

Can you do it for the whole of the military procurement system?

Mr. Callaghan. Not in whole, no, sir.

Senator Levin. Can you do it in some way that we could put our hands on some specific examples?

Mr. Callaghan. I can show you sufficient anecdotal evidence to demonstrate that it is no sport. [General laughter.]

In fact, look at this document (holding it up). It shows the same thing.

I have this document which I understand the Pentagon is about to grant me permission to make available to this committee, which might possibly be issued as a Senate document all by itself. It is 40 pages long and deals with the structural disarmament problem.

If I get that permission, I think that will give you what you need. Ambassador Abshire has already read it.

Senator Levin. That will be very helpful.

My question is does that not only show the current situation, or does it compare the situation to 10 years ago?

Mr. Callaghan. Historically, yes, sir.

Senator Levin. That would be great.

[The information follows:]

STRUCTURAL DISARMAMENT: A VENGEFUL PHENOMENON

(By Thomas A. Callaghan, Jr.)[*]

I was testifying before a House Government Operations Subcommittee 10 years ago on the "Standardization and Interoperability of NATO Military Equipment" when Chairman Jack Brooks (D-TX) asked: "What do you see as a long-term consequence of the continued failure to develop a unified and coherent NATO military [industrial] structure?" I answered Chairman Brooks as follows:

I think if present trends continue, without a North Atlantic defense market structure, the United States, which provides 20 percent of NATO's forces, will be spending more and more money developing a full range of military systems, inadequately funded—as the Senate Armed Forces Committee pointed out in the 1970s—and produced in ever smaller numbers, in a vain attempt to achieve qualitative superiority over the massive conventional forces of the Warsaw Pact. If things stay as they are, Europe, which provides 80 percent of NATO's forces, will fail to organize its defense procurement effort on a united and collective basis, and the time may not be too distant when the 12 armed nations of Europe will lack the resources, either to develop and produce economically themselves—or to procure from the United States—weapons which can complete in quantity and quality with those of the Warsaw Pact. This is a formula for the unilateral disarmament of NATO sometime in the next five or 10 years, bringing us face to face with the danger President Kennedy warned against: surrender, or nuclear war.

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The 1977 Senate Armed Services Committee statement reads: "There are strong indications that the Department of Defense tries to keep twice as many projects alive as can reasonably be funded at a full level of effort. The result is that many programs crawl at such a slow rate that they are obsolete well before they are deployed to the forces, or are overtaken by subsequently developed technologies."

Ten years later in its May 1987 report on the Fiscal Year (FY) 1988-89 Defense Authorization Act, the Senate Armed Services Committee is still concerned that "the defense budgeting system permits more programs to be included in the budget than there are funds available to procure those programs." The committee quoted the Comptroller General's testimony: "Historically, too many weapon systems have been started or proposed for the limited funding available, and often the cost estimates for the systems have been overly optimistic. The combination—too many programs and optimistic cost-estimating—has produced the much discussed bow wave phenomenon where future funding requirements out-strip funding availability."

Although the committee said that "inefficient production rates are a deep-seated, long-term problem," which is "extremely difficult to reverse," the reference to the bow wave phenomenon implied it was a problem the Defense Department and the congress could somehow correct by themselves some day. They cannot. The bow wave is the symptom, not the cause of structural disarmament.

In my 1977 testimony before the House Operations Subcommittee, I predicted the unilateral disarmament of NATO caused by the absence of a North Atlantic defense market structure—hence the term, structural disarmament. The disarmament aspect is straightforward and generally well recognized. In a 1986 lecture in London, former Supreme Allied Commander, Europe (SACEUR) Gen. Bernard Rogers noted that: ". . . every time we replace a system, the cost of the newer one has increased by a factor of from three to five. Consequently, we procure fewer and fewer systems as replacements each time, contributing to what is called structural disarmament."

Structural disarmament is a NATO-wide phenomenon. It is a result that is not intended by any of NATO's 15 defense ministries, nor is it correctable by any one defense ministry alone, including the United States Department of Defense (DoD). It is caused by national defense markets (including exports) that are simply too small to permit the continued unnecessary duplication of development effort on the one hand, and the continued production of weapons at less than optimum production rates on the other. The cause of the disarmament is structural. The solution is also structural. So disarmament will continue until the United States and its allies abandon the national market structures used to provide for NATO's conventional defense. We need a two-pillar North Atlantic defense market—with all unnecessary duplication of effort eliminated—to provide a large enough market structure to permit NATO's needed conventional rearmament at politically affordable prices.

The size of a market determines the price of the product, military or commercial. For centuries commercial economics and trade have been moving towards larger markets, providing economies of scale and ever more affordable prices. Defense economics has bucked this trend with ever-larger product lines, small national markets and consequently higher prices.

High-tech commercial products such as aircraft, computers, satellites and a myriad of producer and consumer electronics have been produced competitively and in quantity for continental or intercontinental scale markets. High-tech military weapons on the other hand, have been produced in limited quantities, often without competition, at less than optimum production rates, for small national defense markets. Little wonder that in the past 40 years (as The Economist recently noted) many manufactured goods sold on free markets have risen in price about tenfold, while many military items have risen a hundredfold.

As unit prices go up, the number of weapons a country can afford goes down. Most countries have tried to escape this result by exports. In 1984 then French Defense Minister Charles Hernu forthrightly acknowledged, "If France didn't export, it couldn't buy its own weapons from its own producers . . . The cost would be too high . . . and we would have to buy more weapons abroad." France, like the United

States, considers buying abroad to be an alternative to be avoided at all costs—even at the cost of curtailed conventional capability. But the export option offers diminishing opportunities for NATO governments, what with the oil glut, Third World debt and the entry of new low-cost, low-tech producers like China, South Korea, Israel, Brazil and others.

European governments have suffered far more from structural disarmament than has the United States, and for two reasons. This is partly because European defense markets (and budgets) are much smaller, their duplication of effort is greater and more harmful, and competition is not the norm in European defense procurements. But secondly, the military buildup that began under President Jimmy Carter and was greatly expanded under President Ronald Reagan forestalled the worst for the United States until now.

In May NATO's Secretary Gen., Lord Carrington, told a Capitol Hill seminar sponsored by the EuroGroup and the Center for Strategic and International Studies (CSIS) that: "National parochialism in the development and procurement of weapon systems [has] resulted in what can only be termed nonsensical situations, such as four different national main battle tanks in Europe that cannot even fire the same ammunition; or a host of different national tactical battlefield communications systems that cannot speak to each other or even to NATO's own communication system. This is a recipe for operational discord, not harmony. The critical fact is that the Alliance today is spending more and more money to buy less and less equipment, and the spiraling costs of our small, inefficient production runs are threatening to overwhelm defense budgets.

"What is particularly ominous about this structural disarmament is that it is now striking with a vengeance even against the continental-size market of the United States. No wonder then that the same process caused earlier havoc in Europe."

The Senate Armed Services Committee also reported in May the following serious trends illustrating the vengeance with which structural disarmament is striking the American defense posture:

During the past five years, weapons have been produced at just 50 percent of efficient production capacity.

A fourth of the major acquisition programs during the past five years were manufactured at a rate below the minimum economic rate for those systems.

Half of the largest 20 weapons systems were stretched out compared to last year's plans.

How could this have happened during the largest peacetime military buildup in American history? The answer, of course, is that it didn't just happen. It has been a long time in the making. A 1981 Joint Economic Committee Staff study pointed out that "each of the previous five administrations began with hopes of controlling cost overruns and improving the efficiency of defense procurement. None succeeded. Unless the trend is reversed, the cycle of higher unit costs leading to increased budgets, and increased budgets contributing to higher unit costs, will be perpetuated." Defense Secretary Caspar Weinberger's FY 1982 report recognized that the conventional force buildup begun under President John F. Kennedy was aborted by the Vietnam War and never resumed. As a consequence, there was a multi-hundred billion dollar backlog of investment requirements awaiting the new administration.

Moreover, structural disarmament (though not recognized as such) was already far advanced. The 1980 reports of the U.S. House and Senate Armed Services and Appropriations Committees recite example after example of the impact of procurement "at a very, very inefficient" rate on the entire American defense posture—on increased unit and total costs, on extended delivery time, on reduced quantities to be procured, on systems prematurely phased out, on production lines being shut down, on vendors by the thousands quitting the defense business, on inadequate readiness and on limited combat sustainability.

The Reagan defense budgets could not reverse these trends because they were militarily too small, although politically too big. This became evident in 1982 when Under Secretary of Defense for Policy, Fred Ikle, testified to congressional committees that even an increase [in defense research, development, procurement and construction] as high as 14 percent per year, continued throughout the decade, would not close the gap in accumulated military assets between the United States and the Soviet Union until the early 1990s.

Politically, a 14 percent year-by-year increase in defense budgets simply is not feasible. But even if it were, the gap between NATO and the Warsaw Pact could not be closed by American efforts alone. The Europeans provide the bulk of NATO's standing forces in Europe: 90 percent of the manpower; 95 percent of the divisions, and 85 percent of the tanks; 75 percent of the tactical air forces, and 80 percent of the combat aircraft; 75 percent of the naval forces, and 70 percent of the ships. No increase in the American defense budget, short of World War II levels and a resumption of lend-lease, would be large enough to correct European deficiencies. Only collective defense-industrial efforts within a two-pillar, transatlantic defense market, with financial burdens and economic benefits equitably and efficiently shared, can redress the NATO-Warsaw Pact conventional forces balance. (See "NATO's Collection of Forces," JODD, July 1987). Similarly, only collective defense-industrial efforts within such an intercontinental defense market can provide the economies of scale needed to eliminate structural disarmament on both sides of the Atlantic.

The Reagan administration's military buildup saved the United States from the much more costly project stretchouts, followed by cancellations, industrial mergers and failures which shrunk Europe's defense industries and capabilities in the 1960s and 1970s. But the buildup is over. The builddown is underway. Much of what will happen in the United States in the next few years will mirror the havoc structural disarmament has already caused in Europe. Consider the following examples from Senate and House documents on the FY 1988-89 budget.

The Administration's Five-Year budget request submitted in January 1987 contains a $452 billion shortfall from the Five-Year request submitted just two years ago in February 1985.

Technology based investment peaked just before the Vietnam War at 3.1 percent of total DoD obligations in FY 1965. It has never again returned to that level; it is budgeted at about one percent in FY 1988. This continuous decrease in funding (the Senate Armed Services Committee noted) has led to an erosion in our longterm ability to sustain a qualitative edge over potential adversaries.

The army vice chief of staff told the armed services committees that the army will be only one-third modernized when its current projects are completed.

The army modernization program is being prematurely terminated far short of requirements, as the table for the army's five key modernization projects demonstrates:

	Final procurement	Percent modernized	Follow-on scheduled
Apache Helicopter	1988	49	1995
Blackhawk Helicopter	1991	36	1996
MLRS Rocket Launcher	1993	49	([1])
M-1 Abrams Tank	1992	71	1996
M-2 Bradley	1991	60	1996

[1] No follow on

Note that the four follow-on systems are not scheduled to enter service for from four to seven years after production of these five systems is terminated.

A third of all the navy's combat aircraft in the FY 1987 Five-Year Defense Plan were removed from the FY 1988 budget, presumably to make way for two new aircraft carriers. As a result, the average age of the navy's aircraft will increase from 23 to 26 years. To forestall this accelerating trend of ever-more aging naval aircraft would require an additional $26 billion—a sum the Senate Armed Services Committee doubts ever will be paid.

The completion of the navy's 600-ship program is dependent upon a now unlikely three percent increase in navy procurement budgets.

For six consecutive years, the budget has failed to provide for the annual procurement of the 234 tactical fighter aircraft required to maintain and replace the tactical air fleets. The result is the steady aging of the force which translates into reduced capability and rising support costs. The air force has abandoned its planned expansion to 40 tactical air wings.

No weapon systems are optimally funded. None! The cost in ever-higher unit prices and lost weapons production is knowable, but unknown. This ignorance joins inertia in Micawberish optimism that something will turn up, and it will not. There is no domestic solution to structural disarmament.

ECONOMIC ANALYSTS PREDICT DECLINE

Meanwhile, Wall Street analysts are predicting a shrinking of the American defense industrial base, with mergers (already underway) the likely trend. Prime contractors are pulling work back in-house, as they always do when times are tough. To minimize the worst effects of project stretchouts, congressional committees are cutting back on new starts, transferring funds from nuclear to conventional projects and increasing readiness and sustainability funds. But these actions correct symptoms, not causes. The rob-Peter-to-pay-Paul phenomenon is a classic example of structural disarmament.

With technology base disinvestment, stretchouts, rising unit costs, fewer new starts and reduced export opportunities—plus sharply increased cost burdens imposed by the Pentagon—industry must shrink. I believe it is safe to say that one-third of the American defense industry will not see it through to the 21st century unless Alliance governments can reverse structural disarmament. Europe already has been through this phase of structural disarmament. Ask yourself: Where is English Electric? What ever became of Messerschmitt? Where is Nord Aviation? They and many other fine and once independent European companies are long gone, victims of domestic defense markets that were too small either to sustain them economically or to subsidize them at a politically affordable cost.

Long-term solutions to structural disarmament are not likely until 1989. The close cooperation of the president and congress needed to propose a two-pillar Alliance structure to European governments is not likely until after the presidential election. But much can be done in the meantime, particularly in the field of military, political and public education.

First of all, not many in the military, in the Pentagon political leadership, in the congress and certainly not in the body politic are aware of the enormous cost of structural disarmament. Why should they be? There is no mechanism for systematically identifying the cost, project-by-project, and then adding it up service-by-service and DoD-wide. But it would not be too hard to do. The focal point would be the relevance of stretching out production to structural disarmament. Optimum weapon system funding means providing the minimum amount of money required to produce the maximum number of units on one eight-hour shift, five days a week. Optimum funding covers both recurring or fixed costs such as plant, equipment and other overheads, and non-recurring costs such as labor and material costs directly related to each unit produced. By reducing the number of units produced per year, thereby stretching out the schedule, non-recurring costs are reduced. But the fixed costs are now spread over fewer units, increasing both unit and total program costs even though annual costs are reduced.

U.S. Gen. Lawrence Skantze, commander of Air Force Systems Command, explained the consequences of stretchouts in an interview in September 1985:

". . . The F-15 cost has always been a function of what happened to the production rate . . . a lot of your cost is the overhead," he said. "And if you only build 48 airplanes [a year] as opposed to 150 [a year], no matter how efficient the manufacturing is, you've got to load the overhead." Stretchouts increase the proportion of overhead to military products, so that every funding level below optimum buys more overhead and fewer weapons. This is the essence of the structural disarmament phenomenon. Money is simply spent wastefully and imprudently—loading the overhead!

The air force estimates that stretching out the F-15 for just three years in 1970s cost $2 billion—a sum that could have purchased 83 F-15s but merely purchased overhead instead. Stretching out the army's Patriot missile and fire units for a similar period in the 1980s cost $1 billion—a sum that could have bought 1,760 additional missiles.

The House Armed Services Committee reported in 1983 that the proposed reduction of 135 M-1 Abrams tanks to be procured the next year would stretch out procurement an additional two years and add $743 million to the total program cost. The optimum funding rate for the M-1 is reported to be 90 tanks per month, or 1,080 per year. Assuming this optimum figure is accurate, what is the cost of procuring only 50 per month, or 600 per year as proposed in the current budget?

These few examples show both the economic and military cost of structural disarmament. For an Alliance that worries whether it can provide a credible conventional deterrent, the loss in ships, tanks and aircraft that are never built is intolerable. Even worse—the magnitude of the loss is not even known. A first step, then, would be to determine and make public the military and economic consequences of structural disarmament. This could be done for the United States by the under secretary of defense for acquisition requiring every major project to be costed at 1) an optimum funding rate and 2) the proposed budgetary funding rate. The difference between budgeting to schedule (the optimum funding rate) and scheduling to budget (stretchouts) is the cost in dollars and in lost weapons production. These figures should be presented to the congress and the public so they too may understand the costs.

For our Canadian and European allies, the deputy secretary of Defense should propose at the next meeting of the so-called Reinforced North Atlantic Council that

Allied defense ministers each do the same, and share the figures with one another, with the United States, and with the parliaments and citizens of the North Atlantic Alliance. These two steps would educate the military, the political defense leadership, the parliamentarians and congressmen—and the public—to the terrible toll that duplication of effort and structural disarmament are taking in (1) diminished collective defense and (2) wasted national resources. The data would demonstrate the need for cooperation, competition and military trade within a two-pillar, North Atlantic defense market. It would lay the groundwork for the structural changes that will have to be addressed by Allied heads of governments and parliaments in 1989.

Ambassador ABSHIRE. Mr. Chairman, I would urge that the committee put his product out as a document that centers attention just on that.

Senator LEVIN. We would very much like to get that document so that we could consider that.

If you have any trouble at the Pentagon, let us know.

Mr. CALLAGHAN. I understand that it is in the mail, sir.

Senator LEVIN. Would either of you, for the record, give us any similar problems that the Warsaw Pact might have.

I know that it has to be a lot less because we don't hear much about it. Give a little thought to it. I don't want to use my time now on this question. But if you could, tell us for the record if anything comes to mind as to whether or not they have six different guns that are made in Czechoslovakia, made in Hungary, made in East Germany, or whatever, or whether this is a nonexistent problem for them. That would be helpful as well.

[The information follows:]

The Warsaw Pact weaponry is standardized, but the evidence is inconclusive as to whether they too are suffering from structural disarmament. Let me elaborate on each of these two points.

First, on Pact standardization. Major weapons are designed and produced in the Soviet Union, though they may also be coproduced in Czechoslovakia, East Germany or Poland and then sold back to the Soviet Union to earn the rubles to buy other weapons from the USSR. Lesser weapons are designed and produced in each of the non-Soviet Warsaw Pact countries (Czechoslovakia, the GDR, Hungary, Poland, and even Bulgaria and Rumania) and also sold to the Soviets. The Waraw Pact Treaty Organization has formal structures for coordinating (perhaps directing is a more accurate word) the military-industrial activities of the member states, and ensuring the standardization of Warsaw Pact forces.

Some will say the Pact nations, like NATO, are also de-standardized. There is truth in that statement to the extent that not all countries have all the latest weapons. So there is de-standardization between weapons generations, just as there is in the west (e.g. between M-60s and M-1s, or Leopard Is and IIs); and there is often de-standardization between the Soviets with the latest, and the others with older weapons.

The Soviets follow an incremental design philosophy as does Dassault in France. New generations of weapons are not a radical and total re-design, but rather a partial re-design involving significant improvements. As with Dassault, this minimizes technical risk and cost, and preserves a goodly bit of commonality between generations of weapons.

It is interesting that the communist bloc uses market methods to exchange weaponry, while we in the capitalist world primarily use barter i.e. coproduction, licensed production, offsets and compensation. They also emphasize standardization and mass production, and we do not. In the 7th Annual Rationalization, Standardization and Interoperability (RSI) Report to the Congress in 1981, Defense Secretary Harold Brown said of NATO:

Diseconomies of scale about, with far too many different and duplicative weapons being developed and produced in smaller than optimum quantities at ever higher unit costs. The legacy of Eli Whitney (standardization) and Henry Ford (mass production) is being more effectively applied by the Soviet Union than by the nations of NATO.

> Second, on structural disarmament—they too should run up against structural disarmament in the very nature of things. But the evidence is just not available to sustain such a conclusion. One has to have historic output comparisons, and accurate input information to determine what is happening. There is some evidence that their conventional weapons output has leveled off in recent years. Why? Because of structural disarmament? Or input reduction? Or input reallocation? We would like to know, but we don't.

Senator LEVIN. Ambassador Abshire, let me pick up on a discussion point that we entered into before, and that is the question of to what extent we use positive versus negative incentives, to use a euphemistic word, for pressure.

You said that you, particularly in a post-INF environment, are for a recommitment—that was your word—by us to Europe of conventional defense in Europe, and you are also for recommitment by the Europeans to that concept.

Let me tell you that I am, too. For all kinds of reasons. I am, too. Part of the function of this subcommittee is going to be to promote that commitment and recommitment to the defense of Europe, conventionally, because we are going to be putting less emphasis on nuclear weapons.

What happens if there is no recommitment on the part of Europe?

We know the figures. We see them all the time. We have 6 percent GNP going into defense, we have certain per capita expenditures to defense, the average NATO GNP commitment to defense in per capita expenditure is less.

I know that there are exceptions to this, by the way, without getting into the fact that there is a great variety of commitment.

Let's assume that overall we still, 5 years from now, judge that the European recommitment is not comparable to ours and is not what it should be, but that we have done our job—let's be idealistic—that we have done what we should. Let's assume that, and that we still see that they have not done for their own defense what we have done for what we'll call the common defense, because it is the common defense that we are talking about here. There are common values that are being defended.

Then what do we do?

After how many more years do we finally tell our constituents look, we have tried to get a greater contribution, we have tried to get commonality in weapons production, but we still have them producing 11 different radios, or whatever it is, we have tried to get forces moved from the central part of Europe to the north, but we connot do it politically, that we have tried to build tank barriers in Germany but we can't because of the political problem—whatever it is that we tried to do to produce a reconfirmation, a reaffirmation, to European defense, and if we reach a conclusion a few years from now that we just have not been able to move the Europeans from that 3.1 percent of GNP going to defense, or whatever, then what do we do?

Do we just say well, you have not done your share but we are going to continue to do what we have to do anyway?

Is that what you would do?

Ambassador ABSHIRE. I think in that pessimistic picture, which could happen if we don't decide to do anything, I think events would take over. We would end up with an a la carte alliance, we would end up with protectionism on both sides. Having opposed and worked against the recent troop withdrawal amendment 3 years ago, which was very different from the Mansfield amendment—and I worked against that—I think we would end up withdrawing troops, and I think we and the Europeans would create conditions of uncertainty in Europe.

Now, I am not trying to be alarmist, but people can forget history so quickly, like in 1914, with uncertain commitments. I think what would happen then is that the Soviet sway and influence over the European picture would grow so mightily as a result of conventional capability that they have that we will end up with far less commitment.

You see, unlike some Europeans I do not think it is a matter of the President of the United States simply making an announcement. It is whether deterrence and defense are really practical, not some absolute matter of faith.

Those conditions would not be there under those circumstances.

Senator LEVIN. You have talked here today and in your papers about a commonly funded European research program. I have two questions there.

What happens if it does not come about?

What happens if the balkanization of weapons procurement production continues? What happens?

What you are telling us is it would be awful if that happens. But are you saying that we should not even provide a timetable for what we would do in response?

Ambassador ABSHIRE. I'm not just talking about armaments cooperation, but I am talking about a range of other elements, and if this becomes an a la carte alliance. I can give you a dozen other ways that it can happen and increase the pessimistic scenario six or seven-fold. I am writing a book on this subject, and it is a frank one.

Senator LEVIN. Would you provide them any timetable for action on their part, and unless such a timetable were generally met, certain responses would come from here?

Ambassador ABSHIRE. I would like to put it this way.

I think the next president has to understand and has to have people and congressional leaders working with him, because here we do have a storehouse of knowledge, so that in that first 60 or 90 days that he is in office, working with Congress, there would be a basic review.

I think I can be very pessimistic and I can be optimistic I believe in the possibility of leadership on both sides of the Alliance, and I feel that there are the ingredients there to move things forward. If the next president and the next Congress do not move in that kind of direction, then we will see a winding down.

So my timetable is put a little differently than your question to me. I am saying that after the next election we should do an appraisal with the Europeans and get together with another heads-of-government meeting, do some of the things that Callaghan has talked about and others, and make that a dramatic moment to face up to the next 10 years in the Alliance.

But if we do it at a petty pace and don't face it in a holistic fashion, then things could very easily wind down.

There are now the ingredients to move this in a different direction.

Senator LEVIN. Would you have someone put up your second chart again, please.

Your second point there is agreed critical deficiencies.

There has already been an assessment, as I understand it, of critical deficiencies and needs inside NATO.

Does either of you have any idea as to what extent the Nunn initiative would address those critical deficiencies with a common research program? Is it 5 percent? Is it 25 percent? Is it a drop in the bucket, this $200 million a year for a new initiative?

Ambassador ABSHIRE. No, because the $200 million gets into the billions down the line. It is huge.

Senator LEVIN. How would you describe this? Is a significant part of meeting the agreed critical deficiencies the $200 million?

Ambassador ABSHIRE. It is a significant part of the major critical deficiency, which is a vulnerability against reduced warning blitzkrieg attack, and follow-on forces capability, getting at the opponent's reserve is not the sole, but is one of the key element, so that spearhead is cut off from its base as it moves through.

Senator LEVIN. You are saying not just symbolically, but that in actual dollar, physical terms, that $200 million in new initiatives will, if it leads to the production of such systems, lead to a significant portion of the solution?

Ambassador ABSHIRE. Absolutely.

Senator LEVIN. Mr. Callaghan, would you agree with that?

Mr. CALLAGHAN. I think it is an excellent start, sir.

Senator LEVIN. But is it just a start?

Mr. CALLAGHAN. It is just a start, yes.

After all, we are talking about a couple of hundred million that will grow to $2.9 billion when you complete development, $2.9 billion before production, yet we are talking about into the tens of billions each year being spent on non-cooperative development on each side.

I think the answer to your question would come if we had mission-oriented budgeting, because then you could see how this fit in to the totality of what we are doing, and fit in, in turn, with the totality of what our allies are doing.

Senator LEVIN. You would describe it a little differently.

You would say that it is an excellent start.

Mr. CALLAGHAN. An excellent start.

Senator LEVIN. But you would not say that it would solve a majority of the problem?

Mr. CALLAGHAN. Not yet, sir.

Senator LEVIN. Would you say that it would be a majority of the problem, Ambassador?

Abassador ABSHIRE. I think there are other things, mobilizable reserves and so forth, and that is why I hate to say that. But I think if you take the balanced technology initiative and get it in there with it, you could solve 50 percent of it.

Mr. CALLAGHAN. I would say one more thing. If you increased this amount every year, to the point where we were spending, say, 25 percent or more of our R&D on cooperative R&D, it would be enormous. But it has to be increased year by year, step by step.

Senator **Levin**. Let me wind up by again thanking both of you. You made an extraordinary contribution, not only during your lifetimes, but this morning, to our deliberations as well. We are going to be working very hard in this area, and your continuing help is needed.

We are grateful.

I know that Senator Wirth, in particular, wanted me to mention to you how reluctant he was to leave because he is so much involved in this area and thinks so highly of both of you. He just had other commitments that piled up, so he did have to leave.

All of us here who heard you this morning are very much in your debt. Again, we will be looking forward to your continuing help to this subcommittee.

Thank you both very much.

Mr. **Callaghan**. Thank you, Mr. Chairman.

Ambassador **Abshire**. It was a pleasure to be here.

[Whereupon, at 12:45 p.m., the subcommittee adjourned, to reconvene upon the call of the Chair.]

ALLIANCE AND DEFENSE CAPABILITIES IN EUROPE

TUESDAY, OCTOBER 20, 1987

U.S. SENATE,
SUBCOMMITTEE ON CONVENTIONAL FORCES
AND ALLIANCE DEFENSE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

MILITARY BALANCE IN EUROPE

The subcommittee met in open session, pursuant to notice, at 2:16 p.m., in room SR-222, Russell Senate Office Building, Senator Carl Levin, chairman of the subcommittee, presiding.

Present: Senators Levin, Wirth, Shelby, and Quayle.

Staff present: Romie L. Brownlee, deputy staff director; Richard D. Finn, Jr., Sherri Wasserman Goodman, John J. Hamre; professional staff members; and Richelle M. Turner, staff assistant.

Also present: Greg Weaver, assistant to Senator Levin; Donald A. Mitchell, assistant to Senator Glenn; Robert K. Griffith, Jr., and Thomas Scott Bunton, assistants to Senator Wirth; Terrence Lynch, assistant to Senator Shelby; Henry D. Sokolski, assistant to Senator Quayle.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Senator LEVIN. The subcommittee will come to order.

The subcommittee meets this afternoon for its fourth hearing in a series of hearings on NATO's conventional defense.

A major issue which has been discussed in previous hearings is the military balance in Europe between NATO and Warsaw Pact forces.

We are going to cover that issue today from the perspective of four defense analysts. We are going to have two panels.

Our first panel of witnesses this afternoon will consist of Dr. John Mearsheimer, who is an Associate Professor of Political Science at the University of Chicago, and Dr. Eliot Cohen, who is a Senior Research Fellow at the Naval War College.

After they complete their testimony, a second panel will appear before us, comprised of Dr. Richard Kugler, who is the Director of the Strategic Concepts Development Center at the National Defense University, and Dr. Joshua Epstein, who is a Senior Fellow at the Brookings Institution and a Visting Lecturer at the Woodrow Wilson School, Princeton.

We appreciate all four of you taking the time to appear before this subcommittee today. We know that at least one of you has come from out of town in order to participate. We are grateful to all of you who have been able to get here today and who are willing to take time out of your schedules to give us some information from your own perspective.

We may be interrupted for votes this afternoon, as we were delayed by our party meetings on Tuesday. Senator Quayle is not here yet, and when he comes, we will interrupt to see if he might have an opening statement at that time.

I think you are all familiar with the way things work around here. We may have to leave you in the middle of your testimony. But we will try to break at a logical point if we have to break.

Again, we appreciate your patience and now call upon Dr. Mearsheimer.

STATEMENT OF JOHN J. MEARSHEIMER, PROFESSOR, POLITICAL SCIENCE DEPARTMENT, UNIVERSITY OF CHICAGO

Dr. **Mearsheimer**. Thank you very much, Senator Levin. I will take about 15 minutes to lay out my views on the conventional balance.

The basis argument I would like to make is that the conventional balance in Europe is quite good. I want to explain my reasons for reaching that conclusion.

Before I get to the basics of the argument, let me offer four caveats.

First, although I think the conventional balance in Europe is good, I do not think that situation should lead to any deemphasis on nuclear deterrence. I am in favor of maintaining a strong nuclear deterrent.

Second, my optimistic view of the conventional balance does not mean that I favor conventional arms control, especially conventional arms control that results in pulling forces out of Europe. I would point out here—and I can talk about it later if you are interested—that I am firmly opposed to an agreement that results in pulling out any American forces from Europe or reducing the size of the standing forces of any of our European allies'.

Third, I am not going to say anything about the balance of air power in Europe, in large part because of time constraints.

Fourth, I think it is important to emphasize that one should not talk about the balance in terms of absolute certainty. For example, one should not say that the balance is simply good or that the balance is simply bad. When you talk about the state of the conventional balance in Europe, you are talking largely about likelihoods and not air-tight judgments.

The basic argument I am making here is that I think NATO would stop the Pact probably 7 out of 10 times, if you can put a rough approximation on it.

My argument basically has two parts to it. The first part deals with the raw numbers in Europe, specifically comparative force rations or what are sometimes referred to as bean counts. After talking about the balance of forces, I want to discuss operational strategy that both sides would employ in a war. I think that if I can convince you and others that we are not hopelessly outnumbered in Europe, then the issue becomes one of strategy or, more specifically, how the Soviet strategy of blitzkrieg and the NATO strategy of forward defense will play themselves out in a war.

Turning to the subject of numbers, let's start with the balance of standard forces.

The conventional wisdom, I think it is fair to say, is that we are hopelessly outnumbered in Europe. People who make that argument usually focus on artillery and tanks, and make the claim that NATO is outnumbered in those categories of weapons by about 3 to 1, and, therefore, all is lost.

I would challenge these comparisons of tanks and artillery, pointing out that you don't fight wars with batches of weapons. Wars are not simply fought with batches of tanks and batches of artillery pieces.

For example, when the Pentagon runs a war game, it does not say Side A gets 5,000 tanks, and Side B gets 6,000 tanks. Instead, each side gets so many divisions.

Wars are fought between fighting units, and the basic fighting unit on the modern battlefield is the division.

So, if you are interested in measuring raw numbers, the place to start is not with tanks and artillery pieces, but with divisions.

Now, the problem with comparing raw divisions is that there are differences in the size and composition of Warsaw Pact and NATO divisions.

Now, the Pentagon has gotten around this problem by coming up with an indicator, known as armored division equivalents, or ADEs, that tries to control for these differences in size and composition. If you look at the ADE balance of standing forces in Europe, you see that the Warsaw Pact has an advantage over the United States and its allies of approximately 1.2 to 1. I repeat, 1.2 to 1.

That is hardly a staggering advantage. In fact, it is a small advantage.

I would note that that 1.2 to 1 advantage does not take into account, as Barry Posen has pointed out in a very important article, that NATO spends much more money on command and control, logistics, training, and maintenance that the Pact does, and yet those factors are not figured into the ADE measure. ADEs capture the raw number and quality of weapons inside each division. They do not account for things like training, logistics, maintenance, and command and control.

Posen makes the argument, which I find quite convincing, that the 1.2 to 1 ratio in ADEs should be further reduced to about 1 to 1 when you take those categories of spending into account.

Obviously, NATO believes those categories of spending are very important; otherwise we would not spend significant amounts of money in those areas.

Now, my experience in discussing the conventional balance with people outside and inside of the Government has been that analysts usually agree that the balance of standing forces is nowhere near as bad as most people believe it to be. Proponents of what I call the "gloom and doom school" argue instead that NATO is going to be short-changed with regard to second echelon forces.

The Soviet Union, so the argument goes, is capable of bringing forces into Central Europe from the western districts of the Soviet Union that will simply overwhelm NATO's standing forces. NATO, it is claimed, unfortunately does not have the capability to match that Soviet second echelon.

Now, I think it is quite clear, from a number of pieces in the public record—and I can point to them later in the discussion period, if need be—that the Soviet Union does not have a second echelon that we cannot match.

I believe NATO is fully capable of bringing forces into the Central Europe to match the Soviets' second echelon.

There was a CBO study that was done in 1980, which shows—and I have cut out the key chart from that study and brought it with me—that with a competitive mobilization the armored division equivalent ratio of second echelon forces never goes above 2 to 1. In fact, once NATO begins to bring its second echelon into Europe, the ADE ratio stabilizes at about 1.6 to 1.

That CBO study, I believe, is based on worst case assumptions about Soviet and NATO mobilization rates.

Barry Posen, in the article I referenced before, has done work on this subject of comparative mobilization schedules, and he shows, using reasonable assumptions about mobilization rates, that the ratio of armored division equivalents, Pact to NATO, remains about 1.2 to 1 over an extended period of time, and that, in fact, the Warsaw Pact does not have a second echelon that NATO cannot match.

In short, the basic argument I am making about raw numbers is this. If you look at the standing forces in terms of armored division equivalents, which is the basic measure that the Pentagon itself uses, you see that we have a disadvantage of approximately 1.2 to 1. And if you look at the ability of both sides to bring second echelon forces into Central Europe, there is no reason to believe that NATO cannot match the Soviets and keep that balance at about 1.2 or 1.3 to 1. We are not hopelessly outnumbered in terms of the balance of raw numbers.

Senator **LEVIN**. What is the date of that chart and how current is it?

Dr. **MEARSHEIMER**. The CBO chart, which I can give you a copy of, is December 1980, and the Posen article is Winter, 1984-1985.

Senator **LEVIN**. I think we have both of them, but if not, we will accept them for the record.

Dr. **MEARSHEIMER**. I think that very little has changed since those two pieces were written.

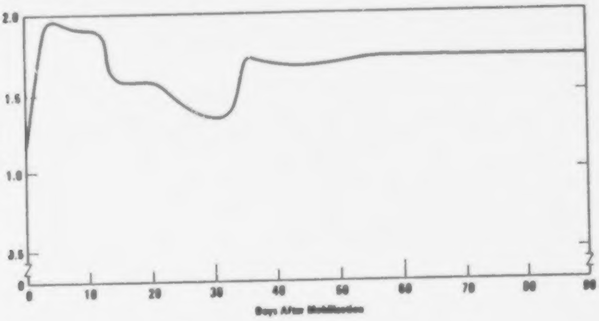
Senator **LEVIN**. I'm sure we do have both, but why don't you leave copies with us just in case.

Dr. **MEARSHEIMER**. I will do that.

[The information follows:]

Figure #1

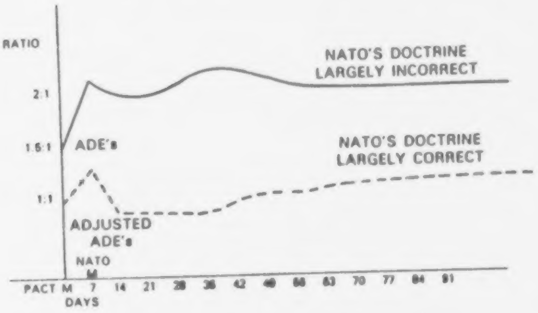
Shifting Warsaw Pact/NATO Force Balance: 90 Days Following Pact Mobilization



From: December 1980 Congressional Budget Office Study entitled U.S. Ground Forces: Design and Cost Alternatives for NATO and Non-NATO Contingencies, p.24. This figure is an updated version of the curve provided by the Defense Department to Congress in June 1976.

Figure #2

Pact/NATO Capability Ratios Over Time; Mobilization Only–No Attrition



From: Barry Posen, "Measuring the European Conventional Balance," International Security, Winter 1984-1985, p.85

Dr. Mearsheimer. Again, the point is that despite the fact one piece is 7 years old and the other is 3 to 4 years old, little has changed in terms of the raw capabilities on both sides.

So, my basic argument is that if you accept my claim that there is no significant asymmetry in the balance of standing forces or in the flow of second echelon forces to the central front, the question of whether or not the Soviets can win in Central Europe is largely a function of strategy.

Now, talking about strategy in Europe, NATO is going to employ a strategy of forward defense. Forward defense is a lot like a goal line defense in football. The majority of our forces will be positioned at the front line, near the intra-German and Czech-German borders, where they will try to stop Soviet and East European forces from penetrating into West Germany.

We have a small number of operational reserves behind those forward deployed forces that are designed to deal with breakthroughs.

We expect the Soviets to attempt to launch a classical armored blitzkrieg. What this means is that they will try to mass armored forces at one or maybe two points along the forward line, break through NATO's defenses at that point, and then drive deep into NATO's rear area, cutting critical lines of communications as they advance, making it impossible for NATO to maintain a coherent defense.

In effect, we believe there will be two major operations in this Soviet offensive; first, the breakthrough battle, and second, the deep strategic penetration or the exploitation phase.

The questions you have to ask yourself if you are analyzing the balance are one, how likely is it that the Pact can make a breakthrough—in other words, rip a hole in NATO's front? Two, assuming they do rip a hole in NATO's front, how likely is it they can exploit that breakthrough before NATO seals off the penetration?

Now, let me take a slightly different cut at this problem because it is important to try to explain what the Soviets will be trying to do in a situation where they do not have an overwhelming advantage in number of forces.

The Soviets will try to use stealth or surprise to create an overwhelming force advantage along NATO's front. They will attempt to gain something more than a 3 to 1 advantage at the main point of attack, which should allow them to rip a hole open in NATO's front.

Now, what NATO wants to do is hold the Pact long enough at that point where it is outnumbered so there is time to move forces to that point from other locations in the theater or from outside the theater, thus reestablishing the overall symmetry at that local point of attack.

Again, I am starting from the basic assumption that the overall balance of forces is somewhat close to parity, and, therefore, the Soviets' only hope is to create a marked asymmetry in forces at a specific point. Then, they must exploit that asymmetry and effect a deep, strategic penetration before NATO shuts the door.

Now, the question we have to ask ourselves is how likely is it that the Soviets can find a point along the intra-German or Czech-German borders, mass forces there, and break through before

NATO moves forces from other areas to reestablish the overall balance of forces at the point of attack?

My argument is that for three reasons it is unlikely—I'm not saying it is impossible because, again, we are in the realm of likelihoods—that the Soviets will achieve a breakthrough.

The first reason has to do with terrain. The intra-German and Czech-German borders are heavily ridden with obstacles, and there are, in fact, not many places along that front where the Soviets can place a main axis of attack.

Most analysts agree that there are probably four or five, maybe six, places where the Soviets can put a main axis of attack.

That small number of potential axes of attack means it is very likely that NATO will guess where the attack is coming. Moreover, because so much of the terrain along the front is obstacle ridden, NATO can thin its forces out in many areas and concentrate them at the likely breakthrough points, thus decreasing the chances the Soviets will make a breakthrough.

The point I am making is that the relevant fronts do not look like an open pool table where the Soviets can choose any point along the front to place a main attack. We are talking about a border that is heavily obstacle-ridden and where the number of likely places to place a main axis is probably four or five in number.

That is point one.

The second reason it is unlikely that the Soviets will effect a breakthrough is because of force to space ratio constraints, which is a terribly important concept that is worth spending a few extra minutes talking about.

It is widely agreed that a brigade on the defense can hold anywhere from 7 to 15 kilometers of front, and in an ideal world, you want a defensive brigade to hold 7 kilometers of front.

The reason that you don't want a brigade holding less than 7 kilometers of front is because a brigade has an elbow room problem once you try to pack it into an area of front no more than 7 kilometers.

But, give a brigade 7 kilometers, and it can hold its position for an extended period of time.

This means that if you are trying to defend 70 kilometers with 10 brigades, each brigade would cover 7 kilometers. Thus, those 10 brigades are going to do quite well for themselves.

Now, why is that the case?

Well, the reason force to space ratio consideration are so important is because the offender has the same elbow room problem that the defender has. In other words, the offender can only place so many of his forces at the point of attack, which means that at the crucial point of contact, the ratio of forces is actually much closer to 1 to 1 than it is, let's say 7 to 1 or 8 to 1.

Let me give you an example to highlight this point. Again, consider a 70 kilometer front and assume that NATO has 10 brigades along that front. Each brigade then covers 7 kilometers.

Let's assume that the Soviets are attacking with 70 brigades. Now, you might say the Soviets have 70 brigades, NATO has 10 brigades and NATO is, therefore, outnumbered 7 to 1.

In a certain sense that is true. But the crucial issue is: what is actually happening at the point of attack?

What is happening is that the Soviets cannot use all of their 70 brigades along the 70 kilometer front. In fact, I would argue that they would be lucky if they could stick 10 brigades along that 70 kilometer front.

But let's assume they can stick 20 brigades along the front. That means at the point of contact, the advantage that the Soviets have over NATO is 20 versus 10. If you accept my argument that they probably could only stick 10 brigades up front, since we can only place 10 brigades up front, you would have a 10 on 10 engagement, with their other 60, or their other 50 brigades strung out to the rear, where they would have the effect on the breakthrough battle.

Now, it is important to realize that most people believe that, to effect a breakthrough, the offender needs at least a 3 to 1 advantage in forces at the point of attack. What I have shown you is that because of force to space ratio constrants, it is unlikely that the Soviets will get more than a 2 to 1 advantage at the point of attack, and, in fact, they will probably have to settle for a 1 to 1 ratio.

To illustrate my point, I would note that in 1940, when the Germans broke through the Ardennes Forest to seal France's fate, the Panzer force that made the breakthrough reached more than a 100 kilometers back behind the front. Those forces that were strung out in the rear had very little impact on the breakthrough battle itself, although they were very important for the exploitation phase.

Now, this brings us to the third factor, which accounts for my claim that the Soviets are not likely to win a breakthrough battle: reinforcements.

I have said that because of terrain and force to space ratio constraints, I think it is unlikely the Soviets would crack a hole in NATO's front.

Many people will say, yes, up to a certain point, Mearsheimer's logic makes sense. However, the problem is that those 10 brigades the Soviets are attacking with and the subsequent 10 brigades they will throw at NATO's 10 brigades will eventually wear NATO's forces down, and then the remaining 40 Soviets brigades will come in and pick up the spoils.

That is only true if NATO does not have reinforcements to move to threatened points.

Now, as I pointed out in my initial discussion of raw numbers, the overall ratio of standing forces in the theater using the Pentagon's ADE count is about 1.2 to 1 in the Pact's favor.

If you look at each side's second echelon and you accept my argument that we can match a Pact mobilization, that we too can bring reinforcements into the theater, then we should be able to reestablish the overall symmetry at the local point of attack. There is no reason we cannot bring in forces to replace our first echelon forces, just as the Soviets plan to do.

In sum, it is not likely that the Soviets will make a breakthrough.

Let's assume, however, that they do make a breakthrough. We recognize from studying past armored wars that the breakthrough battle is a necessary, but not sufficient, condition for success. It is also necessary to exploit that breakthrough and inflict a mortal defeat on the defender before he can seal off the penetration. It is widely agreed upon that, even if a breakthrough takes place, NATO will do everything in its power to seal off the penetration and then counter attack to try to reestablish the front.

Now, what is the likelihood that the Soviets will effect a deep strategic penetration?

The key point to remember is that just because an attacker has ripped a hole in the defender's front does not mean that it is easy to march into the defender's rear. The attacker is in a constantly changing situation. He is in the proverbial fog of war, and the defender will be making every effort to shut the door on him.

The attacker faces a very demanding situation.

Now, it is quite clear from studying German and Israeli experiences in armored war that the two key characteristics that an army should have to maximize its prospects of exploiting a penetration are a very flexible command and control structure and an army peopled from top to bottom with individuals capable of exercising initiative.

The reason is quite simple. You are in a very fluid situation, where all hell has broken loose. You need people in those circumstances who can act on incomplete information, who can think on their feet, and who can make the decisions that will keep the armored forces moving, thus allowing you to exploit the breakthrough before the defender shuts the door. The historical record shows quite clearly, that an army with a flexible command and control structure and soldiers who demonstrate great initiative, is most likely to effect a deep strategic penetration.

Now, we know from looking at the Soviet army that it has a very inflexible command and control structure, and it is an army peopled from top to bottom with individuals who demonstrate little initiative.

If there is any modern army that should have trouble executing a deep strategic penetration, it is the Soviet army.

You may say all right, there is a great deal of truth to Mearsheimer's points about initiative and an inflexible command and control structure, but he is missing the important fact that the Soviet army is highly trained and therefore well-suited to execute a deep strategic penetration.

I would argue that such is not the case. The Soviet army is not a highly trained force poised to execute a blitzkrieg. Let me make a few points to support my position.

First, Soviet soldiers are very deficient in map reading, a skill that is of great importance for exploiting a breakthrough. Second, they have significant communication problems in many of their divisions because of language barriers. Third, and more importantly, the Soviet army trains conscripts inside of its best divisions. When I went into the Army in 1965, I was sent to Fort Dix for basic training. When you get drafted into the Soviet army, you do not go to the Soviet equivalent of Fort Dix. You go right to a regular division and you are trained in that division.

That means that at certain points in time, approximately 25 percent of the manpower in Soviet divisions in Eastern Europe is untrained.

Finally, Soviet divisions in Eastern Europe are only about 85 percent manned in peacetime, and they will have to depend quite heavily on forces brought in from the Soviet Union to fill out those divisions in wartime.

All of this points up that the Soviet army is not highly trained and therefore likely to have trouble exploiting a breakthrough.

Since the Soviet army has an inflexible command and control structure and soldiers who do not demonstrate much initiative, there is substantial reason for doubting whether it would be able to exploit a breakthrough before NATO shuts the door on the attacking forces.

Given my views on the raw balance of forces, the Soviets' prospects of effecting a breakthrough, and their chances of executing a deep strategic penetration, I conclude that the Pact would be stymied close to the intra-German and Czech-German borders probably in about 7 out of 10 cases.

Thank you.

[The prepared statement of Dr. Mearsheimer follows:]

Prepared Statement of

John J. Mearsheimer
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ASSESSING THE CONVENTIONAL BALANCE IN EUROPE *

My presentation today has two aims, the first of which is to provide a primer on how to measure the conventional balance in Europe. The second aim is to consider briefly NATO's prospects of thwarting a Warsaw Pact offensive. I argue that the balance in Europe is a function of six principal factors: (1) the relative strength of the available forces possessed by the two sides, measured as a function of the their firepower, mobility, and survivability; (2) the character of the terrain in the theater; (3) the degree to which force-to-space ratio constraints limit the forces that each side can deploy on the front line; (4) the relative rate at which each side can marshal and deploy reinforcements; (5) the strength of the defender's operational reserves; and (6) the individual initiative and flexibility of the attacker's commanders. After exploring these factors in contemporary Europe I conclude that, contrary to the received wisdom, NATO's forces probably can stymie a Pact offensive in Europe without surrendering much German territory.

HOW TO ASSESS THE CONVENTIONAL BALANCE

A theater balance assessment should begin by positing the goals and strategies of the two sides, and then proceeding to explore the ability of each side to execute its strategy. Thus in Central Europe NATO's goal is to defend West Germany without major territorial loss; to achieve this goal it has adopted a strategy of forward conventional defense. The Warsaw Pact would seek to defeat this forward defense by effecting a blitzkrieg. The Pact blitzkrieg would entail two main operations: a breakthrough battle, followed by a deep strategic penetration. In the breakthrough phase of the campaign the Pact would mass armored forces at one or two points along NATO's front line and attempt to pierce it. Having done this, Pact forces would then try to drive deep into NATO's rear, cutting NATO's lines of communication as they advance, making it impossible for NATO to coordinate its forces and maintain a coherent defense.

According to its forward defense strategy, most NATO forces would be located close to the intra-German and Czech-German borders where they would try to stop the Pact from breaking into West Germany. NATO does have operational reserve forces, which are located well behind the front, and can be used to deal with problems along the forward line or with possible breakthroughs. These reserves are not very powerful, however, since NATO has decided to concentrate on stopping the Soviets far forward. In effect, NATO's strategy is much like a goal line defense in football.

* For further elaboration of the views presented here, see John J. Mearsheimer, Conventional Deterrence (Cornell University Press, 1983); and John J. Mearsheimer, "Why the Soviets Can't Win Quickly in Central Europe," International Security, Vol. 7, No. 1 (Summer 1982), pp. 3-39.

Two basic questions emerge from this discussion of strategy, the answers to which provide the means to assess the conventional balance in a theater such as Europe. First, what are the principal factors which determine whether massed armored forces are likely to rip open a hole along a defender's front? Second, if a breakthrough happens, under what circumstances could the attacker's armored spearheads exploit their opening and effect a deep strategic penetration before the defender shuts the door on them?

Four factors are most important in determining whether a breakthrough is likely, of which the first is the relative strength of the opposing forces. The best measures of relative conventional strength are those that capture the full range of the combat capabilities of the forces, including their mobility, survivability, and firepower (including the rate and lethality of their fire). The measure that best captures these capabilities in ground forces is the "armored division equivalent" (ADE) score that the Pentagon uses as its basic measure of ground force capability.[1] An ADE is a ground unit possessing the mobility, survivability, and firepower of one American armored division. The Pentagon has assigned ADE scores to all NATO and Warsaw Pact armies, based on their net capability, to permit a direct comparison of strength across armies. This allows a net comparison of NATO and Warsaw Pact ground strength.[2]

A thorough assessment of the opposing forces' strength should portray both the balance of standing forces in the prospective theater of combat and the capacity of the opposing sides to move reinforcements into the theater. Rates of reinforcement are important because a rough balance of standing forces could quickly become an overwhelming advantage for one side if reinforcement capabilities are asymmetrical. Thus, for example, a thorough assessment of the NATO-Pact balance of forces should include estimates of both sides' buildup and reinforcement rates, expressed in ADEs.

Relative force ratios are important indicators of the outcome of theater engagements, but they do not tell the whole story. Force ratios are good predictors of success in protracted wars of attrition. This is not a significant issue for NATO, however, since the chief danger to NATO is a Pact blitzkrieg, not a war of attrition.[3] Force ratios also reliably indicate quick success when one side has an overwhelming force advantage. It is difficult to say precisely what ratio represents a decisive advantage for an attacker, but the defender would probably be in serious trouble if the overall balance of ADEs in a theater of the size and geography of Central Europe favored the attacker by 2:1. A theater-wide balance of 3:1 or more would almost surely mean rapid defeat for the defender.[4] The attacker could then easily concentrate forces along various breakthrough sectors and simply steamroll over the defender's forces, regardless of how well the defender fought.

However, if the balance of ADEs in the theater falls below 2:1 the theater-wide force ratio becomes merely one of several factors that determines the outcome of the battle. The side with weaker force may defend successfully, or may even score an offensive success, if other factors lie in its favor. There are, for example, a number of important cases where an attacker scored a stunning victory without the benefit of numerical superiority. Two of the most well-known cases are the 1940 German victory in France and the 1967 Israeli victory in the Sinai. Therefore, it would be a mistake to assume that a stable conventional balance exists simply because forces are equally balanced or the defender has a small numerical advantage over the attacker.

An attacker who does not have a significant advantage in overall force size will try to use cunning to gain an overwhelming local force advantage, thus creating the opportunity to break open a hole in the defender's front. In effect, the offender attempts to get around the overarching symmetry of forces by establishing a decisive asymmetry at a particular point of attack. The defender's aim, on the other hand, is not to be overwhelmed by that temporary asymmetry of forces so there is time for reinforcements to re-establish the overall balance at the point of main attack. It is a widely accepted rule of thumb that the offender needs a force advantage of at least 3:1 at the point of attack to achieve a breakthrough.[5] The offender's prospects of bringing about such a local asymmetry in forces is largely a function of the other three factors.

Terrain is the second factor determining the outcome of major breakthrough battles. The defender prefers a front covered with obstacles--rivers, mountains, forests, swamps, urban sprawl, man-made defensive positions--so there are few locations where the attacker can place a main axis of attack. The defender then has a good chance of predicting where the attacker will strike, minimizing the attacker's prospects of outfoxing the defender. Also, a defender faced with few possible breakthrough points along the front can concentrate forces in front of them, since the defender does not have to worry very much about the obstacle-ridden portion of the front.

A third factor is the severity of force-to-space ratio constraints. The size of the forces that both sides can place on the front line is limited by the nature of the local geography and the transportation system. Beyond a certain number more forces simply will not fit on the front. Many of the attacker's vehicles must travel on roads, and must be spaced out to prevent several vehicles from being destroyed by single bombs or artillery shells. Therefore, the force that the attacker can place forward is sharply constrained by the thickness of the local road network.[6] Furthermore, it is counterproductive for an offender to cram forces at or near the point of attack because extensive crowding would make it very difficult to maneuver the striking armored forces. The defender can place more forces in prepared positions off the roads, but there are limits to the size of the defender's forward forces as well. This limit, known as the maximum force-to-space ratio, is generally believed to be roughly 1 brigade per 7 kilometers of front for NATO forces in Germany, and slightly less for Pact forces, although these are very approximate rules of thumb.[7]

Force-to-space ratio constraints generally help the defender by preventing the attacker from exploiting whatever local material superiority it enjoys at breakthrough points. The attacker, of course, strives to achieve overwhelming superiority at its chosen breakthrough points by suddenly concentrating its forces at these points. As noted, an attacker probably requires a local force advantage of at least 3:1 to tear open a hole in the defender's front. If both sides have large forces at their disposal, however, the attacker may be unable to place enough units forward to gain a 3:1 advantage, even if the attacker has local and/or theater-wide material superiority, simply because there is insufficient elbow room at the front. Instead the attacker must stack its forces up behind the front, where they can not contribute to the breakthrough battle.

For example, suppose a defender with 10 brigades must defend a 70 km front against an attacker with 70 brigades. It appears at first glance that the attacker has a 7:1 advantage, making a breakthrough very likely. On closer inspection, however, it is apparent the attacker cannot squeeze all 70 brigades along the 70 km front. Instead, the attacker must stack many of those brigades behind the front, where they would not contribute to the breakthrough battle. This situation, which is analogous to the "crossing the T" phenomenon known in naval warfare, means that along the front, where the fighting that will decide the battle is taking place, the relative force ratio would be closer to 1:1 than 7:1. Assuming that both the attacker and the defender can place one brigade every seven kilometers (which is really crowding the attacker's front) the attacker would have 10 brigades matched against 10 defensive brigades, far short of the 3:1 advantage it needs.

One might argue that although those 10 brigades are not likely to pierce the front, they will wear down the 10 defending brigades to the point where the attacker's unused 60 brigades can be brought forward to make the breakthrough. However, this is true only if the defender does not have additional forces it can move to the threatened front. If the overall balance of forces between the two sides approximates parity, the defender, like the attacker, should be able to replenish its exhausted forces, making it very difficult for the attacker to win the breakthrough battle.

To summarize these last two points: the principal goal of an attacker who lacks a decisive advantage in force size is to use stealth to gain an overwhelming local force advantage, thus creating the opportunity to rip open a hole in the defender's front and effect a deep strategic penetration. But if the terrain is ridden with obstacles and force-to-space ratio constraints are severe, the defender can more easily deal with any potentially dangerous force asymmetries that the attacker may gain by stealth, and can re-establish the overall ratio of forces at the point of attack before the attacker breaks through.

This discussion brings us to the fourth factor affecting the breakthrough battle: relative rates of reinforcement. As noted, the defender must match the attacker's flow of reinforcements to the main battle area. The defender must be able to move forces already in the theater, be they operational reserves brought forward or units along quiet areas of the front moved laterally to threatened points. The defender must also be able to compete with the attacker in bringing outside forces into the theater. The basic aim is to insure that the attacker does not win the breakthrough battle by wearing down the defender to the point where the defender has virtually no forces remaining.

After the attacker achieves a breakthrough, its ability to effect a deep strategic penetration is largely determined by two additional factors: the strength of the defender's operational reserves; and the degree of flexibility and initiative in the overall command structure of the attacking forces. The attacking armies will be vulnerable to counter-attack, since they will be moving forward rapidly on unfamiliar terrain at the head of long logistics tails. Hence the defender may be able to seal off the penetration if it rapidly brings reserves to bear, and the size and quality of the defender's reserves become important for this reason.

To forestall such a counter-attack the offender must take immediate advantage of the breakthrough opening and then maintain a rapid rate of advance so as to keep the defender constantly off balance. This is a demanding task because the commanders of the attacker's armored spearheads, operating in the proverbial fog of war, will have to make rapid-fire decisions on the basis of incomplete information, while facing a constantly changing situation. A deep strategic penetration therefore requires a flexible command and control structure and an army commanded at all levels by individuals capable of intelligently exercising initiative. Delegating responsibility to officers and non-commissioned officers who can make bold decisions in difficult circumstances maximizes the prospects that the attacking forces will not get bogged down, undermining the blitzkrieg.

THE NATO - WARSAW PACT BALANCE

Considered together, these six measures indicate that NATO has a good chance of defeating a conventional Warsaw Pact attack in Central Europe.[8] Let us start by looking at comparative force ratios, focusing first on standing forces in the region. The Pact has an advantage in ADEs of 1.2:1. This is not a decisive margin, especially since non-Soviet divisions, whose loyalty to the Pact is dubious, comprise more than half of the Pact total.[9] Most pessimistic students of the balance will concede when pressed that NATO is not badly outnumbered in terms of standing forces and might very well thwart the Pact's initial offensives. Nevertheless, they argue NATO will eventually be overwhelmed by the arrival of Soviet reinforcements from outside the theater. NATO, so the argument goes, cannot match the vaunted Soviet second echelon.[10] Barry Posen has demonstrated that this is largely a myth and NATO, if it mobilizes soon after the Pact does, has the capability to keep the overall ratio of forces close to the pre-mobilization ratio of 1.2:1.[11] In short, NATO has the raw numbers to stand up to a Soviet offensive. The common image of overwhelming Pact material superiority, created by misleading "bean counts" of unrepresentative classes of equipment, is simply incorrect.

NATO also is in good shape regarding the other three factors that would influence the outcome of a breakthrough battle. The terrain along the intra-German and Czech-German borders is ridden with obstacles and there are only a few places, all well-known to NATO planners, where the Pact might place a main axis of attack. Given the excellent intelligence gathering assets available to NATO, it is unlikely NATO will not anticipate the location of the breakthrough battle.

The Pact faces severe force-to-space ratio constraints because NATO has enough forces to thickly populate the front lines; this compels the Pact to pack its forces impossibly tightly in order to gain sufficient superiority to break through. For example, plans call for 30 NATO brigades to be deployed forward along the northern half of NATO's front, which measures about 225 km. If all those brigades were placed right at the front, each would cover 7.5 km. If NATO chose to deploy those forces in the traditional "two brigades up, one back" configuration, each of the forward deployed brigades would have to cover 11 km., with 10 brigades in immediate reserve.[12] Assuming that the Pact cannot put more than 1 attacking brigade on a 7 kilometer front, then Pact forces can only achieve temporary local superiorities in the range of 1.6:1, which is probably not enough to break through. The southern portion of NATO's front, where the Americans are positioned to thwart Soviet attempts at breakthrough, also looks good. The commander of

American forces in Europe recently tasked his staff to examine the force-to-space ratio constraints that the Pact faces. He reports that the resulting study showed that because of "terrain and geographic limitations," the Soviets can place far fewer at the point of attack than NATO planners thought possible. He thus concluded, "The first echelon of the Soviet force is going to have a whale of a time doing anything to us."[13]

Regarding reinforcements, I have already noted that NATO's standing forces are not significantly outnumbered. Since contingency plans exist for moving those forces about the theater to reinforce threatened points, NATO should be able to reduce force imbalances that develop at those points. NATO also can marshal and deploy reinforcements almost as fast as the Soviets can deploy their second-echelon forces from the Western Districts of the Soviet Union.

Thus, there are good reasons for doubting the Pact can rip a hole in NATO's front. Let us assume nevertheless that the Soviets win a major breakthrough battle. How likely is it that they will then effect a deep strategic penetration? Surprisingly little attention is paid to this question, probably because it is widely assumed all would be lost once the Soviets opened a hole in NATO's front. This is, however, a mistaken assumption.

The Soviet army lacks several characteristics important to effecting a deep strategic penetration. It has an extremely rigid command structure and its officers are notorious for their lack of initiative. Soviet prospects look even bleaker when one considers: their soldiers are deficient in map reading skills; they have serious communication problems in many of their divisions because soldiers speak different languages; their divisions in the center region are overall about 85 percent manned in peacetime, which means they would have to rely quite extensively--from the start--on manpower brought in from the Soviet Union; and moreover they train new recruits in those same divisions, which means that for significant periods of time about 25 percent of the manpower in their best divisions is not fully trained. The Soviet army is not a paper tiger, but neither is it a highly efficient fighting force primed to execute a demanding task like the deep strategic penetration.[14]

Although NATO does not have robust operational reserves in the European center region, it has a good number of units that can be used to close down a Soviet penetration.[15] There are three French divisions now stationed in southern Germany and additional French units can reinforce them in a crisis. The Americans have the equipment for five divisions stationed well behind the front. NATO estimates it would take only ten days to fly the troops for those divisions to Europe and "marry" them with their pre-positioned equipment. There is also a Canadian brigade in southern Germany and the German Territorial Army, which can be mobilized in a few days, contains six armored brigades and six mechanized infantry brigades.

Let us assume that a Pact breakthrough occurs on an army-wide sector of about 50 km and that 5 Pact divisions break through, with three divisions leading the charge and 2 divisions immediately behind, and that an equivalent NATO force would be required to stop these Pact divisions. If so, NATO requires roughly 5 operational reserve divisions within reach of the potential breakthrough sector. Using this standard NATO probably has enough operational reserves today. After all, the units listed above should provide enough forces to create 2 operational reserves of 5 divisions each and since it would surely take the Soviets some time to make rip a hole in NATO's front, those reserves should be well-positioned to do battle with the attacking armored spearheads.

CONCLUSION

The chief question in assessing the European balance is whether the Soviets have the wherewithal to launch a successful blitzkrieg against NATO. This question can never be answered with certainty, but there is ample reason for thinking the Soviets cannot overrun Germany with conventional forces. This situation, coupled with NATO's formidable nuclear deterrent, goes a long way towards explaining why no serious defense analyst believes a major war in Europe is likely in the foreseeable future.[16]

NOTES

[1] Analysts often measure conventional capability by counting tanks, artillery pieces, anti-tank weapons and other kinds of weapons. Simply counting tanks or artillery pieces, however, is not a good way of determining the relative strength of the opposing forces. Battles are not merely engagements between batches of tanks and artillery pieces. When the Pentagon conducts a war game, for example, it does not start by assigning each side a certain number of tanks or any other weapon for that matter. Instead, both sides are given divisions (or some part of a division, like a brigade), which represent the basic fighting unit on the modern battlefield. These divisions, of course, contain the weapons that many "bean counters" focus on. There is invariably a problem, however, with simply counting each side's divisions: they are of varying size and composition. The Defense Department deals with this problem by translating raw divisions into ADEs, the best existing measure of relative combat power.

[2] Due to space limitations, I do not consider the impact of airpower on the balance. Although it is possible that NATO's air forces will not have the decisive influence on the ground battle that many expect, it is clear that the air balance, when qualitative and quantitative factors are considered, does not favor the Pact.

[3] Decision-makers contemplating an offensive are very unlikely to strike if they expect to engage in a war of attrition. Instead, it is the possibility of a quick and decisive victory that leads to deterrence failure. A particular military strategy, the blitzkrieg, is the only route to rapid victory on the modern battlefield, and therefore NATO must focus on thwarting a Soviet blitzkrieg. For further elaboration of this matter, see John J. Mearsheimer, Conventional Deterrence (Ithaca: Cornell University Press, 1983), chapter 2. Furthermore, the Warsaw Pact's prospects in a long war of attrition are bleak, since NATO has a much larger latent resource base.

[4] This discussion assumes that the fighting skills of the opposing forces are roughly equal. If this is not the case, however, the ratios would have to be adjusted to account for qualitative as well as quantitative differences.

[5] The subsequent analysis, as will become clear, assumes that the key consideration in determining who wins breakthrough battles is whether or not the attacker can achieve a local force advantage of 3:1 or more. Many students of the conventional balance attempt to go beyond this basic calculation by plugging each side's forces into sophisticated models designed to determine battle outcomes. I am doubtful about the utility of such models and believe that the best we can do at this point is make rough estimates based on force ratios at the point of attack.

[6] To illustrate: When the Germans attacked France in 1940, the forces in their armored wedge extended some 250-300 kilometers from front to back. See Colonel Guenther Blumentritt, Schreiben des Ia der HGr. A an General v. Manstein vom 16. 2. 1940, a copy of which can be found in Dokumente zur Vorgeschichte des Westfeldzuges, 1939-1940, ed. Hans-Adolf Jacobsen (Gottingen: Musterschmidt, 1956), pp. 153-155.

[7] These calculations assume that a brigade, be it Pact or NATO, is approximately one-third of an ADE. Also, these estimates assume that both sides place about two-thirds of the brigade directly forward and one-third in immediate reserve.

[8] Although it is widely assumed NATO conventional forces are hopelessly outmatched, no detailed studies in the public record support that position. In fact, almost every detailed examination of the issue concludes that NATO is already in reasonably good shape or, at worst, that NATO is not far from the point where it could stand up to a Pact offensive. See, for example, William W. Kaufmann, "Nonnuclear Deterrence," in John Steinbruner and Leon V. Sigal, eds., *Alliance Security: NATO and the No-First-Use Question* (Washington, D.C.: Brookings, 1983), pp. 43-90; William Mako, *U.S. Ground Forces and the Defense of Central Europe* (Washington, D.C.: Brookings, 1983); John J. Mearsheimer, "Why the Soviets Can't Win Quickly in Central Europe," *International Security*, Vol. 7, No. 1 (Summer 1982), pp. 3-39; and Barry R. Posen, "Measuring the European Conventional Balance: Coping With Complexity in Threat Assessment," *International Security*, Vol. 9, No. 3 (Winter 1984-1985), pp. 47-88. Moreover, it is my experience from many conversations with military officers and government officials who have worked on this issue that their views generally fall in the same range. In short, the prevalent pessimistic view is a folk myth that is unsupported by scholarship, analysis, or sound professional opinion. How this gloomy view gained such broad currency, especially among members of the press corps, is a puzzling mystery.

[9] Barry Posen convincingly argues that even this ratio underestimates NATO capabilities, because the ADE measure best captures those elements of capability in which the Pact invests most heavily, while failing to capture those elements of capability that NATO stresses. In building its divisions NATO invests heavily in command and control, logistics, training, and maintenance for its divisions, while the Pact does not, instead buying greater numbers of weapons for its divisions. ADE scores underestimate NATO's relative strength because they largely reflect the numbers and the quality of the weapons in a division, while failing to fully measure the military benefit of investment in command and control, logistics, training, and maintenance. Posen concludes that if this bias were corrected the real ratio for standing forces in Europe would be about 1:1. Barry Posen, "Measuring the European Conventional Balance."

[10] I have found that pessimistic analysts will often admit that NATO's standing forces are competitive with those of the Pact, but such analysts frequently advance five additional arguments to salvage their pessimistic conclusions. However, I do not find these additional arguments persuasive. First, they warn that the Pact has greater reinforcement capability. However, this is simply not true, as outlined above. Second, they suggest that the Soviets could launch a massive surprise attack and gain victory by catching NATO unprepared. The problem with this argument is that NATO's forces are regularly maintained in a higher state of readiness than the Pact's, and it would be extremely difficult for the Pact to mobilize those forces without NATO noticing. Third, the pessimists more plausibly claim that NATO will detect a Pact mobilization, but for one reason or another will not mobilize its own forces. This situation may obtain in a crisis and is therefore a deadly serious matter. However, this important political problem has little to do with the military balance *per se*, which is the focus of our attention. It reflects a potential deficiency among NATO political leaders, not in NATO forces; and the solution lies in socializing Western elites to recognize that they must mobilize their forces immediately on receiving warning of Pact mobilization, not in building more NATO forces. Fourth, pessimists warn that NATO will simply run out of ammunition after a few days of fighting. However, proponents of this view have offered no evidence to support their contention. Moreover, publicly available evidence does not suggest that the Pact has any advantage over NATO in this area. Fifth, some pessimists suggest that the Soviets can somehow deploy decisive forces in NATO's rear without without winning a breakthrough battle, by using specialized forces. These include the so-called "Operational Maneuver Groups" (OMGs) that some hypothesize the Soviets have formed, or the "Spetsnaz" special forces. However, no serious evidence has been advanced to support claims that these forces could have a significant impact on the

course of the campaign, and the prima facie case that they could do so is exceedingly weak.

[11] See Posen, "Measuring the European Conventional Balance"; and his contribution to this forum.

[12] Although NATO is now in quite good shape regarding force to space ratios along its front, any significant reductions in the size of NATO's standing forces would undermine that situation, even if Pact forces were equally reduced. This is the case because the force-to-space ratio constraint faced by the attacker is partly a function of the density of the population of the forces in the theater; when the front lines are densely populated there may be no place where the attacker can pack in enough forces to gain decisive local superiority, but if the front lines are thinly populated there may be many places where such local superiority is possible. Therefore, the loss of a handful of American brigades and a commensurate number of German brigades would markedly increase the chances that the Soviets could break through NATO's front. The danger of reducing NATO force levels becomes even more apparent when one considers that NATO does not have very powerful operational reserves in the theater. There is presently some discussion of reaching an accord with the Soviets where both sides pull large numbers of troops out of Europe. Advocates of such an accord apparently hope that the Soviets will agree to asymmetrical reductions in NATO's favor, thus producing overall force ratios that more closely approximate parity. However, their analysis rests on two dubious assumptions: (1) that conventional deterrence is better served by less rather than more forces in Europe, and (2) that parity in overall numbers is a sound indicator of a stable deterrent situation. In fact, it would be a major mistake for NATO to agree to any reductions in its force size, not only because of force-to-space ratio considerations, but also because there is no reason to think that a somewhat smaller Pact force would be any less dangerous than the present one. After all, the Wehrmacht overran the West in 1940 with about 2700 tanks, while the Pact now has more than 15,000 tanks in Europe.

[13] The commander of American forces in Europe, General Glenn Otis, recently reported that his staff had studied the force-to-space ratio constraints on the Pact and discovered that it can place far fewer forces at the point of attack than NATO planners thought possible. He concluded, "The first echelon of the Soviet force is going to have a whale of a time doing anything to us." See Charles D. Odorizzi and Benjamin F. Schemmer, "An Exclusive AFJ Interview with: General Glenn K. Otis," Armed Forces Journal International, January 1987, pp. 44-47.

[14] For important evidence of this point, see Scott D. Dean and Benjamin F. Schemmer, "Warsaw Pact Success Would Hinge on Blitzkrieg, US Army Observer Says," Armed Forces Journal International, November 1987, pp. 29-36.

[15] There has been much talk in recent years about improving NATO's conventional force posture, with most attention falling on two questionable approaches: developing esoteric technologies, and devising new strategies to replace forward defense. However, the only sure way to enhance NATO's prospects in a conventional war is to increase the number of fighting units in Europe. Then, NATO could further thicken its blanket of forces along the intra-German and Czech-German borders and, more importantly, substantially beef up its operational reserves. Unfortunately, there is hardly any interest in increasing NATO force levels and, if anything, it appears that NATO's armies will decrease in size over the next decade.

[16] This conclusion does not mean, however, NATO should de-emphasize its nuclear deterrent. Such a move would be a grave mistake, since conventional forces, even very robust ones, could never have the deterrent value of nuclear weapons.

Senator Levin. Thank you, Dr. Mearsheimer.

What I think we will do is call upon out next witnesses and then have each of you comment upon the other's testimony for a few minutes.

But, before we do that, let me see if Senator Shelby might have either an opening statement or a different suggestion as to how we might proceed.

Senator Shelby. Mr. Chairman, I do not have an opening statement, but I do appreciate your conducting these hearings.

I know the witnesses, as I can tell from what I have just been hearing, are going to help us along and maybe help us better understand where we are going here.

Senator Levin. Thank you, Senator Shelby.

Dr. Cohen, do you want to give us your opening comments? Do you have a prepared statement?

STATEMENT OF ELIOT A. COHEN, SECRETARY OF THE NAVY SENIOR RESEARCH FELLOW, U.S. NAVAL WAR COLLEGE, NEWPORT, RI

Dr. Cohen. Yes, Senator, I do. It is somewhat longer than the 15-minute statement that I was asked to make, so perhaps I could ask that it be placed into the record.

Senator Levin. It will be placed into the record.

Dr. Mearsheimer, did you have a prepared statement?

Dr. Mearsheimer. Yes, and I gave it to the staff.

Senator Levin. Yours will be placed in the record, too.

If you will summarize, Dr. Cohen, it would be appreciated.

Dr. Cohen. Thank you, Senator.

Let me just begin by saying what I would like to do.

First, I would like to make it clear that although I teach in the Department of Strategy at the Naval War College, I am speaking for myself and not for the War College or indeed for any government agency.

Second, I do not want to try to give you in 15 minutes an assessment of the balance, although I would be more than happy to go into that in the discussion session afterwards. I say this for several reasons, the most important of which I think is that in many, though not all respects, it will probably resemble one that I believe you already have from the Office of Net Assessment at DOD. I think the only difference would be that the numbers that I would be able to use would not be as accurate.

Instead, what I would like to do is to focus on a very curious and striking division. On the one hand, we have the news of people like my friend, John Mearsheimer here, which are shared by many others, including William Kaufman and Barry Posen. This view holds, in John's words, that the conventional balance is basically quite good, bearing in mind the uncertainty of all balance assessments.

Now, opposing that one has the views of people like the former Secretary of Defense, Harold Brown, who wrote in 1983, "NATO needs a conventional military capability to prevent a quick conventional Soviet victory by stabilizing for at least 30 days a line near the inter-German border. NATO cannot confidently expect to do this now." That was in 1983. More recently, and to me more disturbingly, General Bernard Rogers, the Supreme Allied Commander in Europe for 8 years who recently stepped down, said in an interview with *Army Magazine* in September, 1987, just last month, "If I could just be assured that we had a sufficient capability to sustain ourselves in a conventional fight beyond a few days, I would be very happy. We have not even reached that point." In an interview with the *Wall Street Journal* on June 22, 1987, General Rogers is quoted as saying how distressed he is by the further deterioration in the conventional balance which has occurred during his tenure as SACEUR.

Why this division of opinion between some analysts and senior practitioners?

Much of it has to do with the nature of the analysis which John and those who share his views have presented, an analysis which is, as you have seen, very forceful, in many respects very compelling, and in many respects very logical. Yet, I believe it is an analysis which is fundamentally flawed in several respects.

I want to address myself to three in particular.

In doing this, what I want to do is to refer not to Professor Mearsheimer's opening statement, since that would be somewhat unfair, but to a lengthier treatment in his article, "Why the Soviets Can't Win Quickly in Europe," which appeared in *International Security* a number of years ago. I take it that this article represents his fuller views on the subject.

Senator LEVIN. That might be even more unfair.

Why don't you ask him if that represents his views or his opening statement?

Dr. MEARSHEIMER. Yes. I would embellish that article somewhat now as I tried to do in my statement, but I think I stand by virtually everything I said in that piece.

Senator LEVIN. Thank you.

Please continue, Dr. Cohen.

Dr. COHEN. For this reason, I am not going to introduce events that occurred since the publication of that piece, which undercuts some of its arguments. An example would be the widespread deployment by the Soviets of reactive armor on their tanks, which considerably undercuts the effectiveness of our antitank guided missiles, which is an item that is discussed. But I think it would be unfair to tax Professor Mearsheimer with that since he could not know about it when the article came out.

Instead, what I would like to do is focus on three analytical fallacies.

The first fallacy is that of alliance homogeneity.

Now, in Professor Mearsheimer's article—and I believe that this underlies his current analysis—is the assumption, which he states quite openly, that NATO will mobilize immediately upon receipt of warning that the Warsaw Pact is about to attack. In other words, that NATO will begin to mobilize very, very shortly after the Warsaw Pact begins to mobilize.

There are a number of problems that I have with this. The first goes to the intelligence question, which I will discuss in a little bit. But there are two other difficulties as well.

The first is the assumption which underlies his analysis (including the force ratio analysis) that NATO will mobilize in a prompt and a united fashion. "Immediately" is the word that is used. It is very striking, and not simply in Professor Mearsheimer's discussion but in many analyses, that we talk about NATO as if it were a thing, a single, united whole.

You gentlemen have been observing NATO for a lot longer than I have, and I need hardly remind you that NATO is not a "thing." It is not a united whole. It is an alliance of 16 free and equal nations, which very, very frequently disagree. And when they do agree, they take a lot of time to come to their conclusions.

One need mention only the pipeline dispute, the neutron bomb dispute, the different European and allied reactions to the bombing raid on Libya, disagreements about technology control, about the invasion of Afghanistan, about what to do about the potential Soviet invasion of Poland.

And those are only examples from the past 10 years.

Moreover, NATO has in its decisionmaking structure an unusually democratic arrangement, in which 16 nations all have an equal voice. I would just point out that in no coalition war in history, certainly none that I am familiar with, does one have anything like that kind of arrangement, which is bound to be cumbersome in wartime.

Therefore, it seems to me that it is extremely doubtful that, (a) one will have a prompt decision or indeed an immediate decision by NATO to mobilize; and, (b) that one would see a united decision to mobilize. This is a problem not only for the analysis which you have already heard, but for analyses in which NATO mobilizes as late as a week behind the Warsaw Pact for NATO is still assumed to mobilize as a whole.

Again, that does not square with what we know of how NATO actually behaves. There are other examples that one could cite, including our reaction to the Czechoslovakian crisis of 1968.

The second fallacy in the argument of the we-can-hold school, or the Optimistic School, as I will call it, is its assumption that we know what is out there. The naive questions that a layman would ask upon hearing discussions of the kind that we have here are "How do you know?"

"How do you know what the Soviets have, and in particular how do you know what they intend to do with what they have?"

"Why do you assume you know as much about the order of battle and the intentions of the Soviet Union as you do, say, about Luxembourg?"

There are, in fact, three critical questions related to intelligence which the optimistic analysis misses. The first is with respect to order of battle, the assumption that we know what the Soviets have, that we know what is in the Soviet inventories, that we know the size of Soviet forces.

Now, obviously, in an unclassified hearing, I cannot go into problems with our contemporary estimates of Soviet conventional forces. But I would remind you that in 1980, then Secretary of Defense Harold Brown, at a time when the United States was withdrawing troops from South Korea, informed the Congress that the North Korean Army, instead of having 450,000 men, had 600,000 men, that, instead of North Korea having 20 infantry divisions, they had 35 infantry divisions; that, instead of having no special forces, they had 22 special forces brigades, each of several thousand men. And the nature of the shortfall in our estimates went beyond these salient points.

Similarly, in the recent reaction to the widespread Soviet deployment of reactive armor in Eastern Europe, one sees a similar kind of uncertainty about the nature of Soviet forces.

Thus, there is reason to ask questions about the state of our knowledge concerning the Soviet order of battle. There is in addition, the problem of warning.

Now, my first criticism of the Optimistic School is that they assume NATO will respond instantaneously and in a united fashion to warning. But, is it really reasonable to think that we will have unambiguous warning? In other words, can we be certain that the intelligence machinery really will function that effectively?

Again, there is reason to think it will not, and for a number of reasons. First, warning is never unambiguous. There are always various psychological obstacles to accepting it. There is no better example of this than the behavior of the Israeli High Command in October 1973, when there were various warning indicators that an Egyptian and Syrian attack was pending, and the Israeli High Command ignored them.

Secondly, even when one does have warning of some kind, it is frequently very difficult to get organizations to do the things they have to do to prepare for an onslaught. When Pearl Harbor was attacked on December 7, 1941, the Commander-in-Chief on Oahu had received a warning only 10 days before, which began, "This is a war warning," a message that he had never received before. He had, as early as March 1941, a very detailed, and, as it turned out, quite accurate assessment of what a Japanese attack on Pearl Harbor would look like.

Thirdly, a further obstacle to warning—and this is a very serious one in my view, one which people in the Government and outside the Government do not take nearly seriously enough—is the problem of deception, or, more accurately, what the Soviets call "maskirovka," that is, deception, cover, and concealment.

I have mentioned deficiencies in our understanding of the order of battle, and argued that the optimists are too optimistic about warning.

Thirdly, the optimists have, in a number of ways, systematically misunderstood the ability of the Soviets to conduct the kinds of operations which Professor Mearsheimer has described, the breakthrough, and not so much the exploitation but the battles of encirclement, which are more what the Soviets seem to have in mind.

Since I see time is running short, I would be happy to give some examples of where I think they have gone quite wrong in the question-and-answer period, because I do want to finish in 15 minutes, as I was asked to do.

The third broad fallacy is that of a two dimensional or in some cases even a one dimensional or linear battlefield.

In his article, Professor Mearsheimer says he will not discuss the air balance, I think not simply because of lack of space, but because, as he said, it is his view and the view of many that the air balance favors NATO. This may have been true in the past, but it is not necessarily clear that it is true today. And it is certainly not clear that the air balance favors NATO when one considers the various specific purposes the Soviets have in mind for their air forces—bearing in mind that Soviet doctrine of what to do with air forces is quite different from Western doctrine.

We have tended to underestimate the importance of the initial Soviet air operation, a preemptive attack on NATO airfields, which the Soviets do talk about, an attack which need not be conducted only by Soviet aircraft and not simply by Soviet aircraft deployed in forward regions, but by their strategic air power, and also by special operations forces and by surface-to-surface missiles, which, as you now know, are getting to be highly accurate with conventional munitions.

We also have not discussed, or at least the Optimists have not discussed, a radical change in the balance. When one looks at things like armored attack helicopters, where NATO had an edge of about 1.4 or 1.5 to 1 only 6 or 7 years ago, the ratio is now 3 to 1 in favor of the Warsaw Pact, when one is looking at armored attack helicopters.

In addition, the optimists, particularly when they are doing this sort of armored division equivalent analysis, stacking up forces opposing one another, have made a curious assumption, which is that all artillery shoots straight forward and that it is impossible mass fires across divisional or even brigade boundaries.

The Soviets have devoted a lot of attention to this. They write a great deal about the importance of massing large amounts of fire, not simply manpower and tanks, but firepower from artillery, from rockets, from heavy mortars (which they have in quantity), into key sectors to enable them to achieve a breakthrough.

Thirdly, the Optimists have also underrated and frequently not even discussed the importance of Soviet special operation forces. There have been a number of reasonably good, unclassified discussions of *Spetsnaz*, the Soviet special operation forces. One could safely say in an unclassified setting that there are a lot of them, that they have targeted a large number of installations and points in Western Europe and that those kinds of operations could be expected to interfere with NATO mobilization—that steady stream of reinforcements that the Optimists talk about.

There is a lot more that I would like to say, and I would welcome the opportunity to have discussion back and forth with Professor Mearsheimer and to answer your questions.

Let me just conclude by saying three things. First, I am not saying that NATO will necessarily lose the war in the first few days.

I quite agree with Professor Mearsheimer that one cannot be certain either way. It might or it might not. I am saying, however, that it seems to be that the view of the practitioners, and the opinion expressed by General Rogers and Secretary Brown in particular, strikes me as the more sensible one.

Secondly, it seems to me that if you look over the last 20 years, there has been a steady deterioration in the NATO-Warsaw Pact balance, measured however one wishes, by armored division equivalents, by numbers of tanks, artillery pieces, and so on. There are a number of reasons for this. I don't think there is any point right now in casting blame. But the point is that that deterioration has occurred. How significant it is is a matter of judgment.

Thirdly, as to what can be done to rectify this, all I would say is it seems to me that Congress has very appropriately and prudently supported such initiatives as FOFA on the part of General Rogers, has demonstrated a great deal of concern about the security of the air bases, and about certain kinds of advanced technologies. All of these measures are very important.

I think that you realize that there is no free lunch in matters of defense and that we do not have a problem. We cannot say that that problem simply does not exist.

Thank you very much.

[The prepared statement of Dr. Cohen follows:]

Fallacies in Analyzing the NATO-Warsaw Pact Balance

Statement by
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I. The New NATO Debate

Over the past five years a curious split has developed in the community of those who study and worry about the NATO-Warsaw Pact balance. On the one hand, one has gloomy assessments such as that of Harold Brown, Secretary of Defense in the Carter Administration who wrote in 1983:

> "NATO needs a conventional military capability to prevent a quick conventional Soviet victory by stabilizing for at least thirty days a line near the inner German border. NATO cannot confidently expect to do this now."[2]

More recently, General Bernard Rogers who served from 1979 to 1987 as Supreme Allied Commander Europe has given an even grimmer assessment:

> The conventional imbalance has widened so much during his term of command, the general said, that 'I personally think the day is coming that [the Soviet Union] is going to test us someplace--northern Norway, eastern Turkey, Hamburg or Berlin--and just see what the reaction would be. I'm not sure you could reach a consensus that NATO as a body would react to that test.'[3]

> If I could just be assured that we had sufficient capability to sustain ourselves in a conventional fight beyond a few days, I would be very happy. We haven't even reached that point.[4]

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[1] This paper presents my views, which are not necessarily those of the Naval War College or any other government agency. I am grateful to LTC John Hines, LTC Jeffrey McKitrick, Mr. Andrew Marshall, and Dr. Stephen Rosen for discussions and suggestions which helped me think through the issues discussed below: I take sole responsibility, however, for the material presented herein. This paper forms a preliminary draft of part of a more comprehensive study of the NATO-Warsaw Pact balance which I intend to complete this year.

[2] Harold Brown, Thinking About National Security: Defense and Foreign Policy in a Dangerous World (Boulder, CO: Westview Press, 1983), p. 102. To remedy this problem Brown urged inter alia, implementation of the 1978 Long-Term Defense Program and the attendant three percent real growth in NATO budgets--goals not achieved thus far.

[3] Gary Putka, "Departing NATO Commander Rogers is Gloomy on Future of West's Security." Wall Street Journal, 22 June 1987, p. 32.

[4] "Gen. Rogers: Time to Say 'Time Out.'" Army, (September 1987): 27

At the same time, however, a group of analysts in universities and several policy research institutes (in particular, the Brookings Institution) have come up with markedly more favorable assessments of the balance.[5]

These latter assessments derive much of their undeniable force from an analytic style which relies on extensive quantitative study and certain generally accepted rules of thumb (e.g., a brigade can successfully defend a seven kilometer front, an attacker needs a three to one advantage to achieve a breakthrough, etc.). These authors conclude that the Soviets, as one author's title has it, "Can't Win Quickly in Central Europe" and, more generally, that the balance in Central Europe favors NATO, given the defensive purposes of the Alliance.

This discrepancy between the views of senior statesmen and commanders (and their numbers extend well beyond the two mentioned above) and those of academic analysts is, at the very least, striking. Superficially at least, the latter seem to have a solid case, backed by an analysis of scholarly rigor and depth. In my view, however, the second group has made several glaring errors in its analyses, errors which, when piled on to equally large and faulty assumptions, fatally weaken their conclusions.

For brevity's sake, let us turn to just one such study, which is at once probably the most formidable and influential, John Mearsheimer's "Why the Soviets Can't Win Quickly in Central Europe."[6]

Because Professor Mearsheimer has testified before this committee I will not attempt to reproduce his views. Moreover, I will refrain as much as possible from introducing considerations with which he could not be familiar in 1982, such as the widespread Soviet introduction of reactive armor, a development which has crippled one of NATO's most important defenses, the Anti-Tank Guided Missile (ATGM).[7] My intention is not to suggest that Mearsheimer's analysis has been particularly sloppy or distorted; rather, it partakes of larger errors and misplaced assumptions characteristic of the genre. These errors and omissions have led the NATO-can-hold school, which I will henceforth call the Optimists, to an unwarrantedly rosy assessment of the balance. At the end of this paper I will very briefly suggest other approaches which, I believe, will prove more fruitful.

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[5] For example, William W. Kaufman, "Who is Conning the Alliance?" Brookings Review (Fall 1987); Joshua Epstein, Measuring Military Power: The Soviet Air Threat to Europe (Princeton: Princeton University Press, 1984); Barry R. Posen, "Measuring the European Conventional Balance: Coping with Complexity in Threat Assessment," International Security 9:3 (Winter 1984/1985); John J. Mearsheimer, "Why the Soviets Can't Win Quickly in Central Europe," International Security 7:1 (Summer 1982).

[6] I have used the edition of this essay reprinted by Steven E. Miller, Conventional Forces and American Defense Policy: An International Security Reader (Princeton: Princeton University Press, 1986), pp. 121-158, henceforth cited as Mearsheimer, "WSCWQ." The theoretical structure for Mearsheimer's argument--indeed, much of its substance as well--can be found in his book Conventional Deterrence, a widely acclaimed study of this problem (Ithaca: Cornell University Press, 1983). See, however, the critical review by Jonathan Alford in the Bulletin of the Atomic Scientists (May 1984): 41-42.

7 (Footnote on next page.)

II. "War by Algebra:" Analytic Fallacies in Assessing the NATO-Warsaw Pact Balance

Fallacy #1: Alliance Homogeneity

Mearsheimer begins and concludes his analysis by making it clear that he discusses a scenario in which "NATO's mobilization begins immediately after the Pact starts to mobilize."[8] This makes two large assumptions: first, that NATO will receive prompt warning, a subject discussed below; second, that NATO will act on it. Throughout, Mearsheimer discusses NATO as if it were a solid, unitary actor. He concedes at the very end of his article that this may be problematic but he fails to grapple with the problem of Alliance cohesion in crisis.

But NATO is not a solid "thing." It is a loose coalition of sixteen states, which participate to varying degrees in joint military planning and exercises (neither France nor Spain is a part of NATO's military structure; Norway and Denmark do not allow foreign troops to be stationed on their soil), who harbor mutual resentments and disagreements (Greece and Turkey are perpetually at daggers drawn), and who above all do not act in a united fashion in crisis. In the last decade alone one need mention only the Soviet natural gas pipeline dispute, the neutron bomb debate, the deep differences over how to respond to the Soviet invasion of Afghanistan or the repression of the workers' movement in Poland. NATO is cumbersome and cautious--which accounts for the tendency of more traditional analysts to look at scenarios in which NATO mobilizes a week after the Warsaw Pact begins to do so.[9] More importantly, however, NATO never has, and cannot be expected to act in a uniform or coherent manner in crisis.[10]

The problem of NATO's response under the threat of imminent war has roots not only in the peculiar and complicated institutions of the Alliance but in the essence of coalition warfare. In no large war has an alliance of independent states marched off in lock-step. Invariably some partners drag their heels or even attempt to dodge their responsibilities: all pursue divergent aims. This was true even in the Second World War, when the United States and Great Britain operated in closer harmony than any other alliance in history--an alliance in which the Big Two submitted to

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[7] See two interviews with Mr. Phillip A. Karber, Armed Forces Journal International (May 1987): 42-60, and (June 1987): 112-137. It should be noted, however, that Professor Mearsheimer has adhered completely to the views presented in that article, and has said so to this committee.

[8] Mearsheimer, "WSCWQ," p. 124. Emphasis mine. Mearsheimer goes so far as to discuss the possibility that NATO begins mobilizing before the Pact does (p. 127).

[9] As I shall argue below, this convention still fails to take account of the unfortunate realities of NATO as a coalition.

[10] Richard K. Betts' account of NATO's reaction to the Czechoslovakia crisis and Soviet invasion of 1968 is illuminating. See his Surprise Attack (Washington, D.C.: Brookings Institution, 1982), pp. 81-86.

far less multilateral decision-making than that required by NATO procedures.[11]

Historical analogies and political common sense suggest that the NATO nations, confronted by the possible imminence of war--a cataclysm which many will believe their nations cannot hope to survive--will disagree about a host of measures, including mobilization of reservists, the deployment of U.S. reinforcements to Europe, the evacuation of U.S. dependents, emplacement of minefields or barriers, etc. One can, moreover, expect that the Soviet Union would exploit these tensions with a peace offensive of the kind which helped defeat the proposed neutron bomb deployments of the 1970s.

A NATO mobilization will therefore probably not only occur _after_ (rather than, as Mearsheimer has it, as soon as) the Warsaw Pact begins to mobilize, but will take place in a _partial_ and _incomplete_ fashion. It is, indeed, conceivable that several nations may decline to mobilize at all, either because they do not believe American warnings or because they estimate their best chances of survival to come from an avoidance of any military measure of preparation. The failure of Belgium to conduct military planning and coordination with France and Great Britain through the early spring of 1940 is a relevant historical case in point. One cannot argue that NATO should "plan for ways to mobilize that do not provoke a Soviet attack, but, at the same time, ensure that NATO does not lose its present capability to defend itself effectively against a Soviet offensive."[12] If one assumes that the Soviets might seriously wish and intend to overrun Western Europe, any measure that might thwart them would, objectively speaking, "provoke" them. One may be sure that Soviet propaganda would seek to make any measure, even the most benign (including non-military operations such as the evacuation of U.S. dependents) appear to augur a NATO attack on the East.

It is conceivable--although barely so--that NATO might mobilize promptly and in a united fashion. If it does, however, the Soviets may simply decide to postpone an invasion. If they do, they could plausibly press a further peace campaign directed against the dangerous war hysteria of Western leaders (most notably those in the U.S.). In any case Western suspicions and preparation would be considerably less a second time around. This pattern of events occurred in the Middle East in May 1973, and contributed in large measure to the reluctance of the Israeli High Command to mobilize in October 1973.[13]

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[11] The Australians felt this point very keenly, and strove throughout the war to get permanent representation at the most senior levels of strategy-making. They failed. See, _inter alia_ D.M. Horner, _High Command: Australia and Allied Strategy, 1939-1945_ (Canberra: Australian War Memorial, 1982).

[12] Mearsheimer, "WSCWQ," p. 157.

[13] See, _inter alia_, Brigadier General Yoel ben Porat, "Milchemet Yom HaKippurim: Ta'ut b'May v'Haftaah b'October, ("The Yom Kippur War: Mistake in May, Surprise in October") _Ma'arakhot_ 299 (July/August 1985): 2-9. Porat was a high level Israeli military intelligence officer. A somewhat less complete account can be found in Betts, _Surprise Attack_, pp. 69-74, and the works cited therein.

Nor is it enough to say that the question of response to warning is a "political" issue, and hence out of place in a military assessment.[14] Such an assertion implies a curious rejection of Clausewitz's dictum that all war is dominated by politics. On a more practical note, one cannot to imagine any purely "political" remedy (including the haranguing of politicians in peacetime) which will ensure a prompt and united NATO response. Rather, we must devise plans and peacetime force structures and dispositions which will ameliorate the impact of these unavoidable conditions.

But may one not argue that the Warsaw Pact is also a heterogeneous assortment of states--a coalition of disgruntled states which the Soviets cannot rely on is the event of war? There is some truth in this, and indeed under the right conditions NATO might exploit these divisions.[15] Such splits, however, are most likely to occur if NATO looks likely to win--if, for example, American forces have battered their way into the East. The subject nations face not only an indigenous Communist ruling class but a Soviet system of control as well which will make individual attempts to defect or desert hazardous in the extreme. In the meanwhile the Warsaw Pact remains a far more integrated force--in everything from the structure of its high command to the standardization of its rifles and grenade launchers--than does NATO.

Fallacy #2: We Know What's Going On

Nowhere in the optimistic analyses do we find the first question which might occur to the naive layman: How do you know? Authors quote the International Institute of Strategic Studies' annual Military Balance as if its figures for the Soviet Union were as solidly based as those for Luxembourg. Moreover, the Optimists not only imply that our present knowledge is perfect, but that our intelligence apparatus will detect impending aggression with precision: "there is little doubt that NATO would detect a full-scale Pact mobilization almost immediately."[16] Both assumptions--that we know the current Warsaw Pact order of battle well, and that we will have adequate warning of mobilization or attack--deserve examination. One cannot fully discuss either problem in an unclassified forum, but disturbing historical episodes make one wonder about the Optimists' certainty.

In early 1980, for example, the Secretary of Defense informed Congress that the North Korean Army had 600,000 men, rather than 450,000 men, as thought the previous year--this at a time when the U.S. had begun troop withdrawals from South Korea.[17] The IISS Military Balance, following this reassessment, carried a North

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[14] A point made in footnote 6 of Professor Mearsheimer's testimony to this committee.

[15] See Stephen P. Rosen, "Mutiny and the Warsaw Pact," The National Interest 2 (Winter 1985/6): 74-82.

[16] Mearsheimer, "WSCWQ," p. 157. The term "full scale" may constitute an escape clause; if other kinds of mobilization would be less detectable, however, it is reasonable to think that the Soviets would choose them.

[17] Annual Report of the Secretary of Defense, FY 1981 (Washington: GPO, 1980), p. 50.

Korean Army with twenty infantry divisions in its 1978 edition, but thirty-five the next year. The year following (1980) twenty-two North Korean special forces or commando brigades--each numbering several thousand men--suddenly appeared in the accounts. During this time the IISS's inventory of North Korean tanks increased twenty-five percent, artillery thirty percent, and rocket launchers fifty percent.

This recent episode reveals not incompetence on the part of American intelligence so much as the intrinsic difficulty of collecting information on a totalitarian society, whose masters devote a great deal of attention to concealing their true force levels and deceiving their opponents.[18] When the Wehrmacht invaded the Soviet Union the German General Staff underestimated the number of Soviet divisions opposing them by a factor of two--and knew nothing of the existence of the T-34, a tank far superior to their own. More recently, the wide-scale deployment of reactive armor on Soviet tanks--a development which renders ineffective most of NATO's ATGMs--seems to have come as something of a surprise--at least in its timing and scale--to the West.[19]

The matter of warning is also far from clear cut. The record of our prediction of the Soviet invasion of Czechoslovakia in 1968 or the Israeli assessment in 1973 of the likelihood of an Egyptian attack suggests caution. So too does the steady Soviet effort to reduce our warning time by building up forward logistics and peacetime command nets, thus complicating the problem of warning. Indeed, even fairly clear warning often fails to incite a state or military commands to action: Pearl Harbor was surprised although its commanders received in late November 1941 a message which began, "This is a war warning."[20] As Richard Betts wisely observes, the causes of warning failure are "deeply embedded: human psychology, political uncertainty, military complexity and organizational viscosity."[21] One might add to this the enormously important role of deception. A recently published landmark study of this problem includes one of the first scholarly analyses of Soviet deception in World War II, and it makes sobering reading.[22] In June 1944 the Germans estimated that the Soviet forces opposite them in the central sector of the front had between 400 and 1,100 tanks. The Soviets had 5,000.[23] As early as December 1941 the Soviets employed deception techniques to disguise the weight, timing, and location of their attacks: by 1944 German intelligence (despite--or perhaps because of--important capabilities in the area of signal intelligence) usually underestimated Soviet forces by at least twenty-five percent.[24] When one considers Soviet espionage successes against Western signal intelligence and communications (for example, through the Prime, Pelton, and Walker cases), and the critical role of such intelligence "windows" in the conduct of successful deception,[25] the possibilities are terrifying.

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[18] It is notable that the Soviet term "maskirovka" embraces camouflage, concealment and deception, and applies to everything from the foxhole of a soldier to strategic level control of an opponent's military assessments.

[19] In his testimony Professor Mearsheimer declared that he stood by his article which included the assertion that it is "increasingly difficult" for the Soviets to defeat NATO, "especially because of the proliferation of ATGMs." "WSCWQ," p. 149.

[20] The case of Israeli and U.S. intelligence before the 6 October 1973 Arab attack is particularly important for students of surprise. See Hanoch Bar Tov, Daddo: 48 Shanim v'od 20 Yom, 2 vols. (Tel Aviv: Ma'ariv Book Guild, 1978), Volume I, pp. 240ff; Volume II, pp. 9-47. More generally, see Richard K. Betts, Surprise Attack, especially p. 309.

[21] Betts, Surprise Attack, p. 309.

[22] Michael Handel, ed. Intelligence and National Security 2:3 (July 1987), "Special Issue on Strategic and Operational Deception in the Second World War." See David M. Glantz's article, "The Red Mask: The Nature and Legacy of Soviet Military Deception in the Second World War," pp. 175-259.

There is one other disturbing intelligence-related aspect of the Optimists' analyses, and that is the generally disparaging and often grossly inaccurate assessments made of Soviet operational capabilities. Most frequently this assessment argues that the Soviets lack the initiative required to execute a *blitzkrieg*-type operation. According to the Optimists, the Soviets suffer from a rigid command and control structure and such afflictions as multilinqual forces, which make successful blitzkrieg operations virtually impossible.[26] Soviet operational abilities, therefore, are more in harmony with what

> they did against the Germans on the Eastern Front in World War II. Instead of relying on deep strategic penetrations to bring about the collapse of the German Army, Soviet strategy called for wearing the German Army down by slowly pushing it back along a broad front.[27]

It is difficult, however, to square this view with Soviet operations such as the destruction of Army Group Center (June/July 1944), an operation which penetrated 400 kilometers in three weeks, inflicting 350,000 casualties on the *Wehrmacht*, including the annihilation of 28 divisions. The Vistula/Oder operation of January/February 1945 brought Soviet forces 550 to 600 kilometers forward, also in three weeks. These and similar operations are carefully studied by the Soviets today and generally regarded as models of the operational art.[28] Although the Soviet operational style clearly differed then and differs today from that of the *Wehrmacht* and most Western armies, it nonetheless achieved extraordinary success in penetrating well-defended positions and striking deep, even in unfavorable terrain.

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[23] *Ibid.*, p. 222.

[24] *Ibid.*, p. 243.

[25] See Michael Handel, "Introduction: Strategic and Operational Deception in Historical Perspective," *Intelligence and National Security* 2:3 (July 1987): 1-91. Also, by the same author, "Intelligence and the Problem of Strategic Surprise." *Journal of Strategic Studies* 7:3 (September 1984): 229-281. Allied penetration of German ciphers--and particularly of the *Abwehr's* radio traffic--allowed Anglo/American deceivers to monitor and titrate their deceptions.

[26] Mearsheimer, "WSCWQ," pp. 148-154 and testimony to this committee. Curiously enough, Professor Mearsheimer has made the following observation about *NATO*: "...NATO's variegated structure is a mighty impediment to good command and control. The language problem alone would present great difficulties..." John Mearsheimer, "Maneuver, Mobile Defense, and the NATO Central Front," *International Security* 6:3 (Winter 1981/82): 114.

[27] Mearsheimer, "WSCWQ," p. 131.

The latter point is important, since much of the Optimists' analysis rests on the supposedly few and confined axes of advance available to the Soviets in Western Europe.[29] The Optimists believe that the Soviets have only three or four axes available to them in the Central Front and a maximum of one per 70 kilometer corps sector. Yet Soviet doctrine allows for Front-level penetrations as narrow as twenty kilometers.[30] Moreover, the history of armored warfare is, as Steven David has put it, the story of tanks going where they are not supposed to be able to go--desert sands (North Africa 1941-1942, Sinai 1967), hilly forests (the Ardennes, 1940 *and* 1944), jungle (Burma, 1945), and mud (Southern Russia, February/March 1944). NATO planners would not be the first to underestimate Soviet abilities when matched against formidable terrain obstacles. In 1945 one and half million Soviet troops advanced 500 to 950 kilometers into Manchuria in nine days, defeating a force of some 700,000 Japanese troops backed by large reserves in Korea and northern Japan.

> Soviet units routinely crossed terrain the Japanese considered unpassable, leaving it virtually undefended. Moreover, the Japanese were unable to counter the Soviets' conscious decision to use every possible avenue of approach in their attack... The Soviet tendency to bypass fortified positions confounded Japanese commanders and rendered most Japanese defences useless... Perhaps most unexpected for the Japanese was Soviet reliance on forward detachments to probe Japanese defenses, bypass them, and attack deep into the Japanese operational rear. The Soviet commanders' display of initiative at all levels did not fit Japanese preconceptions of Soviet performance. In fact, the scope of Soviet use of rapid maneuver surprised and confused the Japanese, resulting in a general paralysis of their command and control.[31]

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[28] See, *inter alia*, the 1984, 1985, and 1986 "Art of War Symposia" conducted by the Center for Land Warfare, U.S. Army War College. These symposia reviewed in great detail Soviet operations from December 1942 to March 1945.

[29] Mearsheimer, "WSCWQ," pp. 138-144.

[30] John G. Hines, "Soviet Front Operations in Europe-Planning for Encirclement," *Spotlight on the Soviet Union*, (Oslo: Alumni Association of the Norwegian Defense College, 1986), p. 86.

[31] Glantz, "Red Mask," p. 237.

Fallacy #3: The Two Dimensional, Linear Battlefield

"This study does not consider the impact of air forces on the balance."[32] Many of the Optimists suggest that air power would not affect the outcome of a battle on the Central Front either way. They claim that this represents prudent conservatism on their part, since the air balance probably favors the West. Further, they resort throughout to a peculiarly two-dimensional and linear view of the opposing forces in Central Europe. Thus, when Mearsheimer and others study the opposing line-up on the Central Front, opposing armored division equivalents (ADE's) against one another, they implicitly assume that the Soviets cannot mass artillery fires and air attacks across divisional boundaries. In fact, of course, the Soviets can mass long range artillery and rocket fires in narrow sectors to crush opposing forces. Moreover, analyses which only look at ADE's fighting along a line ignore the host of deep operations which could paralyze a NATO response, and in particular the timely movement of reserves forward.

An initial surprise attack against NATO air bases and air defenses--using surface-to-surface missiles as well as aircraft--could pave the way for one or two days of deep Soviet air strikes against NATO command and control, mobilization centers and the like. The purpose of such an operation would not be so much to win the air battle outright but to support ground operations.[33] Currently, a NATO riposte would prove difficult in view of massive Warsaw Pact air defenses, the heaviest in the world.

In addition to the initial air operation, the Soviets have at their disposal a unique asset in their large and sophisticated special forces units, some of which may already be in place in Europe.[34] These, together with air assault battalions and brigades, which the Soviets have developed since the 1970s, will help disrupt NATO rear areas through sabotage, raids, and targeting of important NATO assets. One may surmise that no comparable capability exists for NATO in Eastern Europe, an area denied to Western special forces in peacetime.

The core paradigm of the Optimists looks to the clash of undifferentiated ADE's along a generally stationary line in Central Europe. They calculate only uninterrupted reinforcement and mobilization rates, and theater wide force ratios.[35] In truth, however, a NATO/Warsaw Pact War could be more likely to see a confused and turbulent battle, conducted throughout the depths of the Western position in Europe. Reinforcements and reserves would move forward fitfully and in fragments, in the midst of indescribable confusion. Panicked mobs of civilian refugees, Soviet special forces, air assault, air attack, and raiding operations, and perhaps even political decisions communicated to national corps commanders will clog up NATO's rear areas in these circumstances.[36]

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[32] Mearsheimer, "WSCWQ," p. 122.

[33] See, inter alia John G. Hines, "Soviet Front Operations in Europe--Planning for Encirclement," and Philip A. Petersen, "Soviet Planning for Strategic Operation Against NATO," in Spotlight on the Soviet Union, pp. 74-125; Dennis M. Gormley, "A New Dimension to Soviet Theater Strategy," Orbis (Fall 1985): 537-569; Philip A. Petersen and John G. Hines, "The Conventional Offensive in Soviet Theater Strategy," Orbis (Fall 1983): 695-739.

[34] See Viktor Suvorov, "Spetsnaz: The Soviet Union's Special Forces," International Defense Review (September 1983): 1209-1216.

[35] Thus, it is critically important that NATO can "shift forces from other Corps sectors and its operational reserves to threatened points along the front." Mearsheimer, "WSCWQ," p. 147 and testimony to this committee. Yet "...there is no doubt that NATO's forces do not have strategic mobility. By and large, they are restricted to fighting in specific area of the NATO front." Emphasis author's. Mearsheimer, "Maneuver, Mobile Defense, and the NATO Central Front," p. 106.

III. How to Think About the Balance

The above does not necessarily imply that the Soviets would win a crushing and instantaneous victory in Europe were war to break out tomorrow. They might and they might not--much would depend on warning and mobilization, and even more on the incalculable clash of vast forces whose equipment and doctrine have not been validated in combat.[37] My point, rather, is that the Optimists' analysis fails to take into account those political-military considerations which have shaped real warfare in the past.

Constraints of space and time do not permit an extensive treatment of the state of the balance in Europe.[38] At the very minimum, however, such an attempt should do the following, in addition to avoiding the errors discussed above:

1. Examine the political contours of the opposing alliances. These are the factors which will very largely shape a war, for war is a thoroughly political phenomenon.

2. Identify and discuss the importance of asymmetries between the opposing sides. In particular, we must look at relative strengths and weaknesses with respect to logistics, command systems, and operational styles.

3. Discuss operational concepts and their implications.

4. Look at long term trends.

The latter is particularly important, for studies which look back twenty years or more can capture the gradual movement of a balance. We cannot hope to come up with a single straightforward set of indicators measuring the effectiveness of NATO forces. We can, however, acquire some sense of, in Abraham Lincoln's words, "where we are and whither we are tending."

In particular, let it be noted that most trends are unfavorable from NATO's point of view. In recent years the Warsaw Pact, and the Soviet Union in particular, has increased its quantitative edge in artillery, tanks, and attack helicopters. At the same time, Soviet forces have eroded the West's qualitative edge--for example, by deploying modern, armored attack helicopters, self-propelled artillery, and advanced fighter bombers. In addition, new gaps have opened up in the areas of chemical weapons (with respect to which the West has begun effective unilateral disarmament in Europe), and other unconventional weapon systems (blinding lasers, for example).[39] A comparison of IISS Military Balance figures from 1981 and 1986 reveals a shift in NATO/Warsaw Pact ratios from 1:2.05 to 1:2.68 in numbers of artillery pieces and in armed helicopters from 1.37:1 favoring the West to 1:2.92 favoring the East.[40] One may debate the meaning of such trends: one cannot deny that they have occurred, despite a substantial build-up of U.S. forces in Europe. These adverse trends have occurred because of two developments: a continued Soviet buildup and a shortfall in European defense programs.[41]

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[36] The campaign of France, May/June 1940 is instructive in this regard.

[37] The last really large scale armor battle took place in a desert in 1973--and even then, the forces and terrain did not resemble that of Europe.

[38] Such a treatment will be attempted however in a forthcoming manuscript.

These trends and NATO's fundamental weaknesses must be addressed in a serious fashion. Barrier plans, new technologies, co-production, and arms control may all prove useful in diminishing the gravity of these problems. None of these programs, however, can serve as a panacea or a substitute for a conventional buildup of comparable seriousness--an alternative that is neither exotic or cheap, but hardly beyond NATO's capabilities. The Congress has, I believe, shown itself well aware of the fact that in this as in so many areas, there is no free lunch.

An assessment of the kind proposed[42] will not, to be sure, have the certitude, elegance, and seeming precision of that presented by the Optimists. Yet it is worth recalling Clausewitz's criticism of efforts such as theirs to, as he put it, reduce war to algebra:

> "They aim at fixed values; but in war everything is uncertain, and calculations have to be made with variable quantities.
>
> "They direct the inquiry exclusively toward physical quantities, whereas all military action is intertwined with psychological forces and effects.

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[39] See, inter alia Supreme Headquarters Allied Powers Europe, "NATO and the Warsaw Pact Force Comparisons, 1973-1986," (Belgium: Brussels, 1987); Heinz Schulte, "NATO/WP Balance: A West German Survey," Jane's Defense Weekly (15 August 1987), 285-287; Benjamin F. Schemmer, "U.S. Army Debates Battlefield Laser Need; Soviets May Have Two Systems Deployed," Armed Forces Journal International (June 1987): 24-26.

[40] IISS Military Balance, 1981-1982 and 1986-1987. If anything this understates some of these developments because of changes in counting rules.

[41] Between 1981 and 1986 West European NATO defense budgets grew slowly and in some cases (e.g., Belgium 1982-1985) shrank. U.S. defense spending grew between 4.6 and 7.8% per annum. West German defense spending went up 3.2% in 1982 but varied between .8% growth and .7% shrinkage in 1982-1986. See Caspar W. Weinberger, "Report on Allied Contributions to be Common Defense; A Report to the United States Congress," (Washington, D.C.: DOD, 1987), p. 38.

[42] Or of the kind briefed to the subcommittee by the Office of Net Assessment of the Office of the Secretary of Defense.

> "They consider only unilateral action, whereas war consists of a continuous interaction of opposites."[43]

Clausewitz's rejection of such approaches makes as much sense today as it did a century and a half ago.

Let me conclude by saying that it is critically important to maintain the integrity of our net assessments. Reasonable men and women can disagree about what the balance looks like but neither the scholarly nor the policy communities should allow one view or the other to be dismissed as the product of interested or hidden motives. Close scrutiny and sharp debate are called for: by convening these hearings, this subcommittee has contributed in no small way to that desirable state of affairs. Only in that way can we and our European Allies begin to grapple with these grave problems which are, albeit at a large price, susceptible of resolution.

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[43] Carl von Clausewitz, On War, Book II ("On the Theory of War"), Chapter 2.

Senator **Levin**. Thank you very much, Dr. Cohen.

Senator Quayle, do you have an opening statement?

Senator **Quayle**. Thank you, Mr. Chairman, but I do not.

Senator **Levin**. Why don't we give each of you just a few minutes to react to the other, so that we will leave most of our time for questions.

Would you take just a couple of minutes, Dr. Mearsheimer, and do that.

Dr. **Mearsheimer**. Yes. I will try to be very brief.

I just want to say a few words about the views of people like General Rogers and former Secretary Brown on the balance. I would note that there are no studies on the conventional balance by them or by anyone else in the public record that shows NATO to be in very bad shape in Central Europe.

General Rogers' and former Secretary Brown's public statements on the balance are largely assertions. They are not backed up by analysis. I would point out that as a Professor at the University of Chicago who is clearly identified with a particular view on the balance, I look for pieces from the opposite side of this debate to give my students. They are extremely difficult to find. Therefore, I challenge both General Rogers and former Secretary Brown, as I have challenged Eliot in the past, to put their thoughts concerning the conventional balance in Europe down on paper. The important point to remember here is that there is no analysis in the public record that shows NATO to be hopelessly outnumbered.

The second general point is that one's views of the conventional balance is usually determined by considerations other than the balance itself.

As I often say to my classes, the conventional balance is a dependent variable. There are usually other variables that drive one's views of the balance.

What exactly do I mean?

First, anyone interested in maintaining a powerful nuclear deterrent in Europe is likely to claim that the conventional balance is bad because an unfavorable conventional balance means NATO has to retain nuclear weapons.

One of the principal reasons why many individuals are today arguing that the conventional balance is terrible is because they want to prevent nuclear decoupling. They fear incorrectly I believe, that my views on the conventional balance will free the movement to pull nuclear weapons out of Europe.

Furthermore, for the purpose of coming up to Capitol Hill and getting money, the Pentagon long ago learned that threat inflation is an effective device. Thus, they constantly scream about how badly outnumbered we are in Europe, all, of course, for the purpose of scaring you into giving them dollars.

If Pentagon spokesmen admitted the conventional balance in Europe is good, they would have real difficulty getting money for that theater.

The final point about why there is so much pessimism on the conventional balance has to do with the conservative nature of military institutions. Military planners, by nature, are very prudent and tend to overrate the capabilities of adversaries.

Now, let my say a few words regarding some of Eliot's points about my views on the balance.

First, it should be emphasized that he did not directly challenge my analysis. He did not directly challenge my numbers, my basic concepts, or my way of looking at the problem.

Now, he makes the argument that we have to worry about alliance homogeneity in other words, what is going to happen in a crisis is that NATO is going to roll over and play dead and not make the hard decisions about mobilization that are necessary to maintain the balance of power in Europe.

There is certainly some possibility that this will happen. Only a fool would deny that.

What this means, however, is that we are not in trouble militarily, but we might have trouble with NATO's political decision-making process in a crisis. I would argue that it behooves us to tell NATO decision makers that the balance is not bad and, therefore, the political decision to mobilize forces in a crisis is of great importance for maintaining that balance.

If you believe the balance is terrible as most people do, what difference does it make whether you mobilize in a crisis? The only people who should care about mobilizing in a crisis are those, like John Mearsheimer, who believe we actually stand a fighting chance against the past.

I make this same point to those who worry about all this talk of pulling forces out of Europe. What I would like to know is why does the Pentagon care whether we pull forces out of Europe? Virtually all its spokesmen believe we are hopelessly outnumbered there. Given that viewpoint, what difference would it make if we took more forces out?

The people who should be concerned about holding the line against troop withdrawals are people like me who believe we now stand a fighting chance in Europe.

Anyway, I agree with Eliot that we have to be concerned about this subject of making hard decisions under tremendous stress in a crisis. We do have to worry about decision-makers getting cold feet in a crisis. Nevertheless, that is a political problem not a military problem.

Senator LEVIN. Let me cut you off there because we are going to have to get to our questions.

Dr. Cohen, would you just take a couple of minutes on this.

Dr. COHEN. Yes. I have a few quick points.

First, I suppose I value General Rogers' assertions pretty highly. The man has just retired from 8 very successful years as Supreme Allied Commander in Europe, a man whose integrity I think you all respect. I certainly respect it. When he tells the American people that he cannot hold for more than several days, I think he really believes it. And I respect that he is going on something more than just native conservatism or a desire to shape the views of the Congress.

I don't think one's views on the conventional balance have to be driven or should be driven by other considerations. Reasonable men can disagree about what to do—reasonable men and women, excuse me—can disagree about what to do in the face of a difficult situation. I can imagine people coming away with the analysis that I would on the whole tend to agree with, with very different conclusions.

What is very important, and here again I believe Congress can play an enormously important role, is to foster good analysis, which does not dodge difficult analytical problems.

I reject John's assertion that I did not directly challenge his analysis. I said it was based on deeply faulty assumptions. That seems to me to undercut a lot of what he says.

I also believe he has in a number of respects misdescribed how the Soviets think and operate.

In addition, responding to his comment, that NATO would roll over and play dead, that was not what I said and that is not what I believe. What I said and what I believe is that NATO will respond in a fragmented and somewhat dilatory fashion to a threat of invasion. That is not the same as rolling over and playing dead. It is responding in a fragmented and dilatory fashion.

We cannot really change that, for that is and will be the nature of an alliance of 16 free and equal nations. What makes more sense to do is to try to design and support military forces that can compensate for that.

If I could make just two more remarks directed to Professor Mearsheimer, I will then turn the floor back over.

I must say I am very struck by the ways in which Professor Mearsheimer describes advantages that NATO has, which, in other writings, he suggests NATO does not have. For example, one thing that he describes NATO being able to do is to direct forces from various parts of the theater to a Soviet breakthrough. In other words, if the Soviets look like they are about to achieve a breakthrough, NATO will be able to take its reinforcements and move them around.

And yet, in an article entitled, "Maneuver Mobile Defense, and the NATO Central Front," which was published only a year or less before the article "Why the Soviets Can't Win Quickly in Europe," he said, "There is no doubt that NATO's forces do not have strategic mobility. By and large, they are restricted to fighting in specific areas of the NATO front. In short, there is simply not a great deal of flexibility built into NATO's deployment pattern."

In addition, although he criticized very sharply Soviet command and control for reasons that I would be happy to go into, I don't think the Soviets are nearly as inflexible as he makes out. It is interesting to read what Professor Mearsheimer said in the same article about NATO command and control. He mentioned, I believe, language difficulties in the Warsaw pact: "NATO's variegated structure is a mighty impediment to good command and control. The language problem alone will present great difficulties. For example, very few officers in the American Army speak German, let alone French, Dutch or Flemish."

Now, I am not trying to achieve simple debating points. It is very important to have a good, balanced understanding of the strengths and weaknesses of both sides. The Warsaw Pact clearly has important weaknesses, weaknesses which in my view we should try to exploit. The point is that it is necessary to have a balanced analysis, and, as I said, not to shirk the enormous difficulties involved therein.

I suppose the final comment that I would like to make is that if somebody were to ask me what it is that makes me so uncomfortable with the optimistic analysis, and, in particular, with Professor Mearsheimer's analysis, despite the respect that I have for him, it is that he makes it very simple. He makes it very straight-forward. He makes it so that you can just plug in the arithmetic, and it all works out.

I just do not think that it can be done that away, in all seriousness.

Senator LEVIN. What we are going to try to do is have a first round of 5 minutes each for questions, so that we can try to get to our second panel.

We will start on our first round. If you want more time, we can take another 5 minutes. But we do have another panel to hear from.

Dr. Cohen, Dr. Mearsheimer has said that you do not challenge any of his specific numbers. Do you? ADEs or anything else?

Dr. COHEN. I challenge the ADE number particularly because it is based on wildly unrealistic assumptions, say the immediate mobilization by NATO that occurs at the same time, virtually, as Warsaw Pact mobilization.

Senator LEVIN. Have you set forth your own analysis in writings somewhere?

Dr. COHEN. I am doing that at this moment. The analysis which I support is the analysis which both of us have seen, the analysis of the Office of Assessment.

Senator LEVIN. I understand, but have you set forth anywhere prior to today your own analysis?

Dr. COHEN. On this particular question?

Senator LEVIN. Yes.

Dr. COHEN. No.

Senator LEVIN. When will your analysis be complete?

Dr. **Cohen**. By January, and it will be submitted to the journal, *International Security*.

Senator **Levin**. I would like, for the record, for you to tell us where specifically you disagree with the specifics of Dr. Mearsheimer's analysis.

Dr. **Cohen**. I would be happy to do that.

[The information follows:]

Comments on the testimony of Dr. John Mearsheimer, U.S. Senate, Committee on Armed Services, Subcommittee on Conventional Forces and Alliance Defense, Hearings, 20 October 1987

Statement by
Eliot A. Cohen
Secretary of the Navy Senior Research Fellow
U.S. Naval War College

(Note: The following was prepared at the request of Senator Levin, who asked for a specific record of my disagreement with Dr. Mearsheimer's analysis presented at the hearings of October 20, 1987. What follows refers to Dr. Mearsheimer's written statement, or rather the draft of that statement which was distributed at the hearings on October 20, 1987. Obviously, I am unable to comment on any revised version of that statement since none has been supplied me. In addition, since I was not supplied with a transcript of Dr. Mearsheimer's remarks before the committee I cannot reply to those, although I do remember strongly disagreeing with a number of observations and arguments by Dr. Mearsheimer made orally. I would be happy to further supplement these observations with comments on his oral remarks.)

Page 1. Paragraph beginning "Two conclusions follow." I draw the subcommittee's attention to Professor Mearsheimer's declaration that it is important to focus "on the concrete military strategies each side plans to employ." In his testimony Professor Mearsheimer does not discuss Soviet military doctrine or Soviet strategic plans for an invasion of Western Europe -- in the nature of things it is highly unlikely that he should have access to such plans. Instead what he has done is to concoct an idealized version of what he thinks _may_ be their plan. In fact, as I pointed out in my testimony, his version of "blitzkrieg" does not square with what we know of Soviet doctrine.

Page 1. Paragraph beginning "The starting point for conventional balance assessment." Professor Mearsheimer says that battles are not "merely engagements between batches of tanks and artillery pieces." It should be noted that neither are battles simply engagements between armored division equivalents (ADEs), which he describes as "the best existing measure of relative combat power." ADEs are simply accounting units. They are not reliable predictors of combat outcome - a point made in studies commissioned by the Office of Net Assessment (Philip Karber _et. al_., "Assessing the Correlation of Forces: France 1940," _BDM Corporation_, 1979). In addition, the ADE is no longer in all cases, or perhaps even in most cases, the chief accounting unit used by the Department of Defense any longer. In this as in other respects Professor Mearsheimer has not updated his arguments from the article he published some five years ago.

Page 1. Paragraph beginning "Numerical balances serve two important purposes." Professor Mearsheimer's assertion that numerical balances are not "a good indicator of success in protracted wars of attrition." This understates the point considerably. By capitalizing on the advantages of initiative and surprise, an attacker can win a quick war with small or even no numerical advantages. After all, the German forces attacking France in May 1940 had fewer troops, fewer tanks, and roughly the same number of fighter aircraft as did the Allies, and yet, as we all know, they won very quickly. Further in the paragraph Professor Mearsheimer offers an assertion that a two to one ratio in ADEs is merely "troublesome." Professor Mearsheimer does not make it clear whether he is referring to the ratio of forces across a theater or within a much narrower sector. Certainly, there are many examples in military history of one power defeating another even when the ADE ratio or its equivalent was quite near one to one, in part by concentrating on very narrow sectors of the front.

Page 2. Paragraph beginning "The Soviets, should they strike against NATO..." Professor Mearsheimer speaks with unwarranted self-assuredness about Soviet strategy. He does not discuss why he believes that the Soviets would only attempt to penetrate NATO's front line at one or two points. In fact, all that we know of Soviet military doctrine (see the references in my written testimony) suggests that they would attempt multiple penetrations of the NATO front line. It is very important to note that Professor Mearsheimer has presented his idealized conception of "Blitzkrieg" as if it were the Soviet master plan. There is absolutely no evidence to support this view. In addition it should be noted that Professor Mearsheimer completely omits the importance the Soviets assign in their doctrinal writings to encirclement, in addition to the breakthrough battles.

Page 3. Paragraph beginning "The outcome of major breakthrough battles..." Professor Mearsheimer overrates the importance of terrain. As a Soviet military proverb has it, "the best terrain for a tank is that in which there are no anti-tank weapons." The history of armored warfare is the history of tanks performing very well where they are not supposed to be able to operate. Obviously, an attack through difficult terrain offers an aggressor the advantage of surprise - an advantage which we know the Soviets prize very highly.

Page 3. Paragraph beginning "The second factor is the severity of force to space ratio constraints..." Professor Mearsheimer offers no support for his view that there is "an optimum number of fighting units that a defender needs to hold to a given length of front." He speaks of "widely accepted rules of thumb" but gives no support for this assertion. Moreover, throughout this testimony (as indeed in his article) there is no discussion of what we know from Soviet open literature about their view of possible force to space ratios. What is worse, there is no historical argument on force to space ratios to support any of Professor Mearsheimer's argument. Instead, he seems to have taken a figure from an Army field manual and adopted it thoughtlessly. In fact, a recent article in Armed Forces Journal includes an account of a Soviet exercise in which the Red Army massed two motorized rifle regiments (each only slightly smaller than a U.S. brigade) in three kilometers, or roughly the sector of a U.S. rifle company. An American general present concluded "that a breakthrough was very much a potential, if the Russians want to pay the price..." (Scott D. Dean and Benjamin F. Schemmer, "Warsaw Pact Success Would Hinge on Blitzkrieg, U.S. Army Observer Says," Armed Forces Journal International (November 1987): 32).

Page 3. Paragraph beginning "This problem of limited elbow room..." Again, Professor Mearsheimer offers no historical validation for this argument about the "crossing the T phenomenon." In the course of the oral testimony at this session, Professor Mearsheimer referred to the German divisions backed up in the Ardennes for the invasion of France in May 1940. It is well to recall, however, that the German army succeeded quite nicely in penetrating French defenses on that occasion.

Page 4. Paragraph beginning "One might argue..." Professor Mearsheimer in this analysis reduces combat to a purely mechanical process - something at odds with what we know combat to be in both the past and the present. Moreover, in his discussion of reinforcements Professor Mearsheimer pays no attention to the havoc that could be, and probably would be inflicted on NATO rear areas by

Soviet special operations forces, air attacks, surface to surface missile attacks, and the natural flow of refugees which would congest roads in NATO's rear.

Page 4. Paragraph beginning "Exploiting a breakthrough ..." The gist of Professor Mearsheimer's argument here is that the Soviets are probably incapable of the kind of initiative required for breakthrough operations. If that is the case, one must wonder why they were able to perform such breakthrough operations repeatedly from 1943 on on the Eastern front in World War II.

Page 5. Paragraph beginning "Let us start by looking at comparative force ratios ..." The ADE figure of 1.2:1 is the same that Professor Mearsheimer used in his article of five years ago. One wonders whether he has examined the similar numbers since then. Moreover, the article which he footnotes has a number of flaws which I will discuss below in a section on Professor Mearsheimer's footnotes.

Page 6. The points discussed on this page are substantially those which I have discussed at length in my written testimony.

Footnote 1. "It is clear that the air balance, when qualitative and quantitative factors are considered, does not favor the Pact ..." As in so many cases Professor Mearsheimer has simply made an assertion without supporting evidence. The "air balance" depends on many things including the purposes for which either side intends to use aircraft, the way in which the war might begin, and the success of a Soviet first strike.

Footnote 2. It is simply incorrect to assert as Professor Mearsheimer does that on the one hand "it is widely assumed NATO is hopelessly outgunned at the conventional level," and that "there are virtually no studies in the public record to support that position." Professor Mearsheimer has the regrettable habit - which he exhibited in committee - of exaggerating the point of view taken by more realistic analysts in order to discredit them. It is not that NATO is "hopelessly outgunned," but rather that NATO faces some very severe difficulties. Furthermore, there are many studies, including the annual assessments of the International Institute for Strategic Studies and a number of articles by Dr. Philip A. Karber of the BDM Corporation in Armed Forces Journal which support the view that all is not well. I refer Professor Mearsheimer as well to the footnotes of my testimony. As for Professor Mearsheimer's experience from talking to "numerous military officers" I can only say that he and I have had different experiences.

Footnote 4. Once again Professor Mearsheimer makes an abstract argument without considering the kinds of frontages Soviet forces would actually use.

Footnote 5. The Posen article to which Professor Mearsheimer refers makes a number of gross errors including the arbitrary inflation of NATO ADE elements on the assumption that NATO's doctrine is considerably superior to that of the Warsaw Pact. This is yet another example of a priori assumption working its way into the Optimists' analysis.

Footnote 6. Professor Mearsheimer's attempt to divide political problems from military problems is unacceptable. It is the nature of strategic problems that political and military considerations are intermixed. That, in fact, is the basis from which we at the Naval War College and the staffs of other War Colleges teach our students. A military balance cannot be considered in isolation from the political context of the war, because wars come about for political reasons Professor Mearsheimer assertion that there is "no evidence to support the contention" that NATO would run out of ammunition is unfounded. Again, I refer him to the statements of General Rogers and Secretary of Defense Brown. Obviously, this gets very quickly into highly classified areas: Professor Mearsheimer frequently operates from the assumption that all relevant information is in the open literature. I believe that the Subcommittee knows that this is not the case. Moreover, Professor Mearsheimer's assertion that "the Pact has no apparent advantage over NATO in the area of sustainability" is yet another example of "assertion not backed by analysis" of the kind that he claims to see throughout the works of those who disagree with him.

Senator LEVIN. Secondly, part of that net assessment is an assessment of the Soviet view of the balance. Do you agree with the net assessment of the Soviet view of the balance?

Dr. COHEN. I do, Senator.

The reasons why I do would very quickly get into the classified realm, though.

Senator LEVIN. I don't want to get into anything classified. I just want to know whether you agree with that part of the net assessment?

Dr. COHEN. Yes, I do.

Senator LEVIN. Now, do you agree with the International Institute's conclusions, "Our conclusion remains that the conventional military balance is still such as to make general military aggression a highly risky undertaking for either side. Though possession of the initiative in war will always permit an aggressor to achieve a local advantage in numbers, there would still appear to be insufficient overall strength on either side to guarantee victory. The consequences for an attacker would still be quite unpredictable."

Do you agree with that conclusion, or is it optimistic in your view?

Dr. COHEN. No. I think my view falls somewhere in between. That is a very ambiguous statement. All war is unpredictable. That is the nature of war. There would be all kinds of assumptions to be cranked in.

Senator LEVIN. Well, you think the outcome is predictable as I understand it? You basically believe the outcome is predictable, is that not so?

Dr. COHEN. No, I do not believe the outcome is predictable.

Senator LEVIN. You don't believe it would be likely that the Warsaw Pact——

Dr. COHEN. There is a difference between predictability and what I think is likely.

Senator LEVIN. Do you think it is likely that the Warsaw Pact will succeed?

Dr. COHEN. Depending on the circumstances, I think there is a good chance that they would. But a lot depends on the circumstances. It depends on the nature of the mobilization. It depends on the nature of the political crisis. It depends on whether nuclear weapons are used.

Senator LEVIN. No, I am not talking about nuclear weapons. I am talking about conventional.

Dr. **Cohen**. It depends also on whether chemical weapons are used. It depends on a whole host of factors. I think one has to look case by case.

I do in general share the view articulated by General Rogers, namely, that NATO would find it very difficult to break an attack for a whole host of reasons, including considerations that were not even brought up in Professor Mearsheimer's analysis. A lot of my objection is to holes in the analysis as much as to things that are simply wrong, although there *are* things which are substantially wrong with it, especially on the Soviet side. For one, there is no mention of stockpiles. When do we run out of bullets? Again, it is a highly sensitive issue and we cannot really discuss it in a serious way in an unclassified setting. But it is clearly a problem and it has been acknowledged to be a problem.

Senator **Levin**. Dr. Mearsheimer, can you give us your assessment of our forward defense strategy as a means of countering Soviet conventional defense? Is this the best strategy used? Is there a better one? Which is it?

Dr. **Mearsheimer**. I think that forward defense is the best strategy, for both political reasons and——

Senator **Levin**. Put aside the political reasons.

Dr. **Mearsheimer**. I think it is the best strategy for military reasons as well.

The terrain in Germany gets increasingly less obstacle-ridden as you move westward. Thus it makes eminently good sense not to give the Soviets a free ride in the troublesome terrain along the intra-German and Czech-German borders.

The second point I would make is you just do not have much strategic depth in the Federal Republic, so that you have to defend forward. There are just important lines of communication, important industries, important population centers that are right behind the border, which you cannot afford to lose.

Senator **Levin**. My 5 minutes are up.

Senator Quayle.

Senator **Quayle**. Thank you, Mr. Chairman.

Let me say first that I think it is very helpful to have witnesses like this, with a back and forth and give and take, where there is an obvious difference of opinion.

Let me just ask Dr. Mearsheimer a question concerning General Rogers' statement and that of former Secretary of Defense, Harold Brown.

I think you said something about how their assessments were not based on any analysis, or something to that effect. Is that right?

Dr. **Mearsheimer**. In the public record, Senator.

Senator **Quayle**. In the public record.

Well, do you think that they have classified analyses and analyses that are very detailed for them to make those public assertions that they do?

Dr. **Mearsheimer**. I don't know. But if they do, I would challenge them to put it in the public record.

Senator **Quayle**. Well, would you presume that they would?

Dr. **Mearsheimer**. No.

Senator **Quayle**. Do you presume that they are just sort of winging it?

Dr. **Mearsheimer**. I have no idea whether they have personally conducted studies on the state of the balance.

Senator **Quayle**. I would just say that General Rogers, at least in my time, has been before this committee a number of times, and I just do not think he has the reputation of someone just coming up here and making these statements for the sake of making statements. I think he has pretty well thought things out. There was information and charts, and we have had a number of hearings where he has talked about a number of charts and analyses.

I cannot speak for Dr. Brown as I was not on this committee, and when I was in the House, he was not before any of our committees. But, his reputation in particular is very, very analytical. I just cannot imagine him making these statements, Mr. Chairman, without having some very detailed analysis and assessment on which to predicate his statements.

You may dismiss them, but I have a very difficult time personally accepting that.

My question as we get back and forth on who is right or wrong on the analysis of the strength of NATO versus the Warsaw pact is this. What kind of problems would we run into from a deterrence point of view in maintaining the peace if, in fact, we went by analyses that were erroneous on the side of underestimating the strength of the Warsaw Pact?

I guess my question is this. We are all capable of making mistakes. We are all capable of making estimations that are more or less. If we, in fact, err on the side of saying that our enemy is really a lot weaker than we think it is, or that we are far more capable, what does that say for peace and what does that say for deterrence, from a practical, analytical point of view, and also from a historical point of view?

Let me ask both witnesses to respond.

Dr. Mearsheimer, Dr. Cohen, who would like to handle that first?

I am just very concerned about this as we try to predicate our decisions here in the Congress. If we are going to make an error in judgment, I sure would like to err on the side, when we start talking about war and peace, of being more secure, rather than less.

How do you answer that question?

Dr. **Mearsheimer**. Let me make three points, Senator, on your question, which I think is a very important one.

First, those who say the conventional balance is bad are, in effect, telling the Soviets that if they invade Western Europe, they are going to have an easy time of it. If you ask me, telling the Soviet Union that it is going to win quickly in Central Europe detracts from, does not enhance, conventional deterrence.

If you are interested in enhancing conventional deterrence, you should convince the Soviets that NATO is in good shape.

The second point I would make is that I don't want to argue that deterrence in Europe is predicated only on or largely on the conventional deterrent. It is not.

The core of NATO's deterrent in Europe is its nuclear forces.

Senator **Quayle**. But if we are going to come to rely more on the conventional deterrence, which a lot of people on this committee want to do, isn't that going to be very, very important?

Dr. MEARSHEIMER. I think it would be a fundamental mistake to create a situation where we increase reliance on conventional deterrence at the expense of nuclear deterrence. Let me explain.

There is a fundamental difference between conventional and nuclear deterrence. Regardless of how formidable a conventional deterrent you develop, it is always possible that the Soviets might conclude that they can win a conventional war quickly and decisively. They might think they can do to NATO what the Germans did to France in 1940.

On the other hand, there are no winners and losers in a nuclear war. There are only losers. Therefore, nuclear weapons provide a level of deterrence that cannot be approximated by conventional weapons.

I am in favor of maintaining powerful conventional forces as well as a powerful nuclear deterrent.

Senator QUAYLE. But nuclear deterrence is the deterrence that has kept the peace, right, not the conventional forces? That is basically what you are saying, right?

Dr. MEARSHEIMER. I think that the two of them in tandem have kept the peace, although it is very difficult to tell exactly what has kept the peace.

As you know, there are some people who argue that these military forces have had little to do with maintaining stability. They believe that the Soviets have never had aggressive intentions, and, therefore, the weapons have never had to work as a deterrent.

Now I don't know whether that is the case or not because it is impossible to know what the Soviets were thinking throughout the cold war. But, if you assume there was some possibility in the years since 1945 that the Soviets might have started a war in Europe, I think it was the combination of nuclear and conventional weapons, but mainly nuclear weapons, that provided deterrence.

Senator QUAYLE. Let me ask Dr. Cohen to try to answer the question of mine on the underestimation of your adversary. If you are going to make mistakes, and mistakes in analysis are made, how, in fact, does an underestimation of your adversary and an overestimation of your strength play out as far as deterrence, which I think Bernie Rogers has so frequently said, is "in the eye of the beholder?"

Dr. COHEN. I think there are two consequences, Senator. The first is that if you go along deceiving yourself that everything is fine and then one day that crisis which we all do not think will happen and we certainly all pray won't happen does occur, and you wake up, my guess is that you are not inclined to make a very firm resistance.

The second point is there are operational consequences to underestimating your adversary.

What I would like to do is just read an excerpt from an account written by an American historian, who is the foremost student of a Soviet blitzkrieg, just one Soviet blitzkrieg. In 1945, the Soviets invaded Manchuria. They were opposed by over three-quarters of a million Japanese troops. In 9 days, they had penetrated between 500 and 950 kilometers, a very deep strike into the Japanese rear. This is how David Blantz, who has written several very large studies on the subject, describes it.

"Soviet units routinely crossed terrain the Japanese considered unpassable, leaving it virtually undefended." That reminds me of comments about impassable terrain in Central Europe. "Moreover, the Japanese were unable to counter the Soviets' conscious decision to use every possible avenue of approach in their attack, not just three or four. The Soviet tendency to bypass fortified positions confounded Japanese commanders and rendered most Japanese defenses useless. Perhaps most unexpected to the Japanese was Soviet reliance on forward detachments to probe Japanese defenses, bypass them, and attack deep into the Japanese operational rear. The Soviet commander's display of initiative at all levels did not fit Japanese preconceptions of Soviet performance." That also sounds familiar.

"In fact, the scope of Soviet use of rapid maneuvers surprised and confused the Japanese, resulting in a general paralysis of—"

Senator **Quayle**. Dr. Cohen, we are going to have to unfortunately interrupt because we are in the second bell now of this vote and my time has expired.

Unfortunately we are not going to be able to continue with our questions and answers. I wish, for the record, that each of you would send to us what you think are the three greatest weaknesses and strengths of the Warsaw Pact and NATO. I wish you would submit just three.

I want to see those. There might be some agreement. We will do it in secret. [General laughter.]

Senator **Levin**. Well, we are doing this in open session.

Senator **Quayle**. Oh, I mean that we will open it and make it public. But they will submit it in secret, from each other, so they won't have the give and take.

Senator **Levin**. And we will open the envelopes simultaneously. [General laughter.]

We are going to recess now for 10 minutes. If it is all right with both you gentlemen, we may have additional questions of you for the record that we would like you to answer.

You can also supplement your testimony and we will make it part of the record. It you would like, comment on anything either of you may have said. This is a rather unusual format we are using here. It is useful for us. Sometimes there are a few rough edges for you. But we appreciate your willingness to undergo this.

Again, we will appreciate additional comments you may have for the record. We will also be sending you questions for the record.

We will now recess for 10 minutes and then will go to our next panel.

[A brief recess was taken.]

Senator **Levin**. The subcommittee will come to order.

Even though Senator Quayle is not back yet, I think we will begin.

Our second panel is made up of Dr. Richard Kugler, who is the Director of the Strategic Concepts Development Center at the National Defense University, and Dr. Joshua Epstein, who is a Senior Fellow at the Brookings Institution and a visiting lecturer at the Woodrow Wilson School.

We appreciate your patience and we appreciate your being with us and your willingness to undergo this process.

Dr. Kugler, we will call on you first.

STATEMENT OF RICHARD KUGLER, DIRECTOR, STRATEGIC CONCEPTS DEVELOPMENT CENTER, NATIONAL DEFENSE UNIVERSITY, DEPARTMENT OF DEFENSE, WASHINGTON, DC

Dr. **Kugler**. Thank you, Mr. Senator. I take it that I can be heard.

Senator **Levin**. Yes, but keep the microphone up close.

Dr. **Kugler**. Yes.

Mr. Senator, it is a privilege to be here and a pleasure to be testifying alongside my good friend and colleague, Josh Epstein. I hope that I can make a contribution.

I have a paper that I have submitted to the staff for the record.

Senator **Levin**. It will be made part of the record.

Dr. **Kugler**. Thank you.

I want to begin by also noting, as Eliot did before me, that I am a member of the Department of Defense, but I am not speaking officially for the Department. I am speaking entirely for myself.

A second point I want to emphasize is that all I can offer you is a civilian appraisal of a military subject, based on techniques that we civilians commonly use, and consequently, I cannot offer you professional military judgment. I think this issue also demands professional military judgment. So I do encourage the committee to consult with the Joint Chiefs of Staff and SACEUR on this subject.

As I listened to my colleague earlier, I could not help but have a sense of bemusement, not at what they were saying, which was good and insightful, but rather at the obvious sheer difficulty they must have felt at trying to compress a subject this complex, and as difficult to characterize, in a period of time so short as a few minutes.

I am sure all of us could go on for hours, days, and weeks on end.

I will try to be brief. But, before I launch into my own technical analysis and obscure the issues with a blizzard of statistics, let me state my bottom line right off, so that you will know what it is.

I personally believe that the risks in Central Europe, all things considered, are uncomfortably high. This judgment is not based on assertion, but on years of analyzing the situation, having access to the relevant public and private data, reading and writing about it, and doing research and talking to senior officials. That is my belief, that the risks are uncomfortably high, all things considered.

At the same time—and I think this is very, very important and is the critical message—the balance in my view is sufficiently close, closer than is commonly believed, such that the pursuit of a viable conventional posture—and I think NATO should have one—is itself an achievable programming goal with the resources that are likely to be available.

In other words, the balance is not so hopelessly askew that it cannot be remedied with a concerted effort on the part of the United States and its NATO allies, employing the resources and excuting the programs that we realistically could pursue over the next 10 years or so. This goal could not be achieved tomorrow, but could be reached over a 10 year period—if we only work together.

That is my bottom line.

Let me elaborate and try to demonstrate why I believe the way I do, by briefly discussing some of the technical factors that bear upon the assessment of the military balance in Europe.

First, we have to recognize that the military balance, the wartime balance in Central Europe, would be different from the peacetime balance, mainly because both sides deploy only about 50 percent of their posture anywhere near the inter-German border. The rest of the forces are deployed further to the rear. Both sides in a crisis would rush those forces toward the forward zones. The balance on D-Day, when the war breaks out, therefore would depend on how many of those reserve forces each side has successfully rushed forward.

There is a major uncertainty about their relative abilities to execute a mobilization and reinforcement effort, uncertainty deriving not only their transportation and mobility capabilities, but also from the nature of the scenario itself the warning time each would have, and the pace at which each would make reinforcement decisions.

Suffice it to say, NATO's principal fear is that the Soviets might gain an advantage by starting the mobilization process earlier than NATO and reinforcing very quickly. I personally fear this on NATO's part is well founded: It is not based on excessively conservative assumptions.

THE NATO-WARSAW PACT BALANCE

With that as a background, let us briefly look at the balance, using the standard planning scenario that the U.S. Government, the Defense Department, and NATO employ. In this scenario, we assume that the Soviets would, in 2 to 3 weeks or so, deploy about 90 combat divisions to the forward areas. We also assume that NATO would start mobilizing a few days after the Warsaw Pact, and would deploy about 45 divisions in the time that it would take the Soviets to deploy 90 divisions.

So, if the war starts then (with D-Day equaling M + 15) we would have the Soviets attacking with 90 fielded combat divisions and NATO, with about 45 divisions equivalents, if we count independent brigades. That relationship, right there, yields a balance of 2 to 1 against us—again, using the DOD and NATO planning scenario.

Now if we look at the forces deployed on the both sides in further depth, we find that the Soviets would have a superior ratio in tanks of about 2.5 to 1, and a superiority in artillery of about 2.7 to 1.

If you take those three static indicators—and I am not suggesting that we do take them as the only characteristic of the balance—but if we take them as an initial cut, I think the implication has to be rather scary. We are outnumbered 2 to 1 in divisions, and by more than that in tanks and artillery, which are the major firepower weapons that dominate a modern battlefield.

On the other hand, if we probe more deeply into the force postures on both sides, a somewhat less scary picture emerges.

It does so because the forces are structured quite differently: are postured differently. For example, NATO's divisions are larger than Soviet divisions. We have more infantry, more antitank weapons. U.S. divisions, for example, average about 16,000 men, and Soviet divisions about 11,000. That is a factor that weighs in our favor.

Also, we tend to have significantly more soldiers in the rear areas performing combat support and combat service support functions; maintenance and transportation, ammunition hauling, command and control, and the like. These soldiers also would make a contribution to the balance, and their contributions, relative to the size of the combat force they are supporting, should tilt the balance somewhat more in our direction.

Beyond that—and this is an important feature also—NATO's TAC air forces would be about the same size as the Warsaw Pact's, and it is fair to say that we still would have a qualitative advantage of some sort, deriving from better avionics, better munitions, better pilots, better command and control, and the like.

I think it is difficult to add all these static indicators up together in some aggregate form. But I think if we did so, we would conclude, overall, that the balance probably is closer than 2 to 1. I would not say it is 1.2 to 1 but I would say it is somewhere between 1.5 and 1.75 to 1, in that range.

Senator LEVIN. What are you comparing—ADE's?

Dr. KUGLER. Sir, my understanding is that the balance would be about 2.1, in armored division equivalents. That would include tanks, artillery, and the other eight different categories of weapon systems. But the ADE methodology, I stress, includes only weapons; their quantity and quality. It does not include manpower performing other combat support and service support functions.

For example, an artillery piece is not just an artillery piece. It can fire at a low rate or it can fire at a high rate, depending on the degree of support it receives from logistics resupply. The ADE metholology does not pick that up.

So, when I say 1.5 to 1.75 to 1, I stress that it is a very crude, rough approximation.

The ratio in manpower probably would be about 1.25 to 1 in the Soviets' favor.

REQUIREMENTS OF NATO'S DEFENSIVE STRATEGY

An additional consideration in analyzing the balance is not only the basic input assets, but also what is required to defend, because it is also true that NATO does not necessarily have to match the Soviets in raw assets.

To some degree, a force on the defense can fight outnumbered and defend successfully, ceteris paribus; other things being equal.

In this regard, the critical issue, is whether NATO's forces meet the requirements of a defensive strategy, which derive from terrain, force to space, and mission considerations, as well as the enemy threat. There is no question but that the Soviets need about 90 divisions for their offensive strategy; the mission and the terrain dictate it.

But NATO probably needs less. The traditional appraisal—and this goes all the way back to the Lisbon force goals and has been sustained by professional, in-house analyses since then—would suggest that a force of 50 to 60 divisions would give one a reasonably high confidence of defending forward successfully.

So, if the standard of judgment is 50 to 60 divisions, and NATO has 45 divisions, we have a quantitative assessment of our posture's relative adequacy.

This relationship of capabilities to requirements tends to suggest that NATO's posture clearly is deficient by several divisions. On the other hand, it is not so grossly deficient that a forward defense is infeasible.

Before I delve further into the balance, let me note the tremendous importance that the U.S. forces play in NATO's posture. We provide about roughly 25 percent of NATO's combat power. If you somehow took U.S. forces out, NATO's posture would be considerably less effective.

Let me also note the equivalent importance the allies have. Individually, they may not amount to much, especially the lowland countries. But when you add them all together, the collective impact is substantial.

Quickly, let me give you an operational appraisal of how NATO's force posture might perform against the threat.

I think NATO is best prepared to conduct a linear forward defense, and might do quite well, in fact, if the Soviets attacked in a traditional, unimaginative, broad front way.

Under those circumstances, we could, as John Mearsheimer has pointed out, array forces and keep them on the forward defense line at the inner-German border. We could fight a cohesive, coordinated defense. We could employ our logistics assets and command and control assets to full advantage. We also could employ our TAC air forces to full advantage.

This is a situation in which the Soviet forces would be dispersed evenly along the front. They would try to wear us down in a sustained attrition battle.

We might do pretty well under these circumstances. Indeed, I have seen some analyses, dynamic analyses, computer analyses, where we clean their clocks. The result depends upon the assumptions we make about relative exchange rates and attrition factors on the two sides, and there is genuine uncertainty there.

However, I think a completely different situation could evolve if, in fact, the Soviets do not attack that way. If they attack, as John Mearsheimer has indicated, employing a maneuver strategy they would concentrate their forces at selected points along the forward defense line, try to gain breakthroughs of NATO's lines, and then use their reserves in successive arrays of echelon formations to advance quickly into the rear area and to encircle NATO's forces or otherwise try to destroy them. Against this attack NATO unquestionably would face serious risks. These risks derive not from the roughly adequate size of its manpower base, but rather from the limited number of combat forces, tanks, and artillery that NATO has.

In this battle, the imbalance in numbers of weapons would become more important.

For example, the terrain is such—750 kilometers—that it takes about 30 divisions to put up a strong forward defense line.

Now, if you start off with 30 divisions and you have 45, by definition, you have 15 in reserve. That normally would be adequate for containing any breakthroughs that might occur.

However, as the battle evolves—and I stress NATO's U.S. reinforcement rate would be very slow for the first month or two—those initial 30 divisions would gradually be worn down. What's more, the front itself, the forward defense line, would expand as bulges develop in the line, like at the Battle of the Bulge.

This expansion tends to increase the requirements for holding the line, while at the same time the pool available to commit to the line would be declining. The net result would be to draw NATO's operational reserves into the forward defense line, and so, the pool of reserves would decline from 15 downward. If you carry on the battle long enough, you can quickly get to a situation over a period of days and weeks in which no reserves at all are available.

Under these circumstances, if a breakthrough occurred, NATO would have a very difficult time containing it.

Could a breakthrough occur? There are many uncertainties, as John Mearsheimer has pointed out. But yes, I think so, and I think history bears this out. A division arrayed on 25 kilometers, even with respectable division frontages, is still not so thickly deployed that a breakthrough cannot happen. It happened at the Battle of the Bulge; it happened at the Ardennes in World War II; it happened countless times on the Russian Front for both forces.

Adequately dense initial frontages are no guarantee of sustained forward defense, particularly if the cohesion of the troops breaks down in the face of a massive, heavily concentrated breakthrough assault.

Should the Soviets get into the rear areas, then we could face very serious difficulties. I think dynamic analyses tend to show that, in this case, a defensive posture can be destroyed fairly quickly and decisively.

A critical issue in all of this is whether the Soviets could execute this maneuver strategy. There are uncertainties here, I totally agree. However, the size of their force, the level of armaments, and their experience in World War II, in which, after all, they successfully defeated the German Army and drove them out of the Soviet Union with just these kinds of attacks, tends to suggest that they may well be fairly good at conducting them. I do not think we can presume that they would not be.

So, there is my appraisal. Notwithstanding all of these risks, I think that building a viable conventional posture is achievable, because the problem is limited to one of breakthrough. I think if we focus our planning and programming efforts on it, we can rectify that problem.

So, to that extent, I agree with the optimists.

[The prepared statement of Dr. Kugler follows:]

SURVIVING 40: TOWARD A ROBUST NATO CONVENTIONAL DEFENSE POSTURE

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The British statesman, Disraeli, once said that "success is the product of sustained commitment to purpose". As it reaches the auspicious age of 40, NATO would do well to reflect on his wisdom. The security that the Alliance enjoys today is largely a result of the ability it has shown since 1949 to work precisely in this way. Equally important, NATO's future will depend upon whether its members can carry forth this tradition. The key to meeting the security challenges ahead is to continue taking Disraeli's advice to heart.

Disraeli especially should be heeded, on both sides of the Atlantic, with regard to the troublesome issue of NATO's defense preparedness. In most other areas (e.g., economic prosperity, political cohesion, social stability) the Alliance today is healthy and far stronger than the Warsaw Pact. In defense policy, however, the situation is more tenuous. NATO's military forces, mainly its conventional forces, are not strong enough to meet its legitimate defense needs. Moreover, the ongoing Soviet/Warsaw Pact buildup, which has upset the military balance over the past 20 years, is threatening to increase further the uncomfortably high risks that NATO already faces. This is a problem that NATO cannot allow to go unresolved and expect to remain secure.

Largely because it has acted vigorously enough in the past, NATO's current nuclear forces are relatively strong. Its modernization plans, led by the Pershing II/GLCM deployment and U.S. strategic programs, also are sufficient to provide nuclear deterrence for the future. But NATO's conventional forces are not comparably effective and are not being improved rapidly enough. Although they are benefitting from important modernization programs, the Warsaw Pact's own improvement efforts are offsetting many of these gains. As a result, the military balance is not evolving in NATO's favor. At best, NATO is holding its own, and it might be slowly falling further behind.

Fortunately, the task of building a more adequate conventional posture is a viable goal if NATO decides seriously to pursue it. The reason is that NATO already has committed many of the resources needed in the critical Center Region as well as on the flanks and at sea. Its efforts over the past 20 years cumulatively have laid a solid foundation of military strength, more so than is commonly realized. Since the improvements still to be made are not large in relation to the sizable posture that already exists, building a better force does not require an "order of magnitude" increase in resources. It can be done with resources only moderately larger than now.

Even so, this goal will not be attained easily. Although the Alliance has ample economic and manpower assets, fiscal constraints are inhibiting it from achieving the necessary levels of defense spending. Presently, most NATO allies spend only about 3% of their GNPs for defense, which is not enough. By comparison, the United States spends more than 6% of GNP, and even its military needs are not fully met. Moreover, most nations are having difficulty meeting NATO's "Resource Guidance" for 3% annual real increases in defense spending. This rate, it is noteworthy, is less than the 4-5% increases that SACEUR correctly has said are needed to achieve NATO's "Force Goals", which express official 5-year planning aims. Unless this situation changes, which is unlikely, defense money will not be plentiful.

The coming period of fiscal austerity dictates that if the Alliance is to build up its conventional posture, it will have to do so through a long, steady effort lasting 10 years or more. This will require steadfastness, patience, and willpower on both sides of the Atlantic in the face of frustratingly slow progress. Fiscal reality also will compel the Alliance to try hard to use intelligently the resources that will be available. Above all, it will have to set firm priorities and adhere to them. In focusing on major deficiencies and high leverage remedies, it will need to avoid funding less important measures that do not solve truly primary problems. It will have to manage well, something that any one nation, much less a large alliance, is hard pressed to do.

This agenda is demanding enough to test the capacity of any alliance, even one as cohesive as NATO. In order to master it, NATO first must develop good ideas that deserve to be acted upon. In essence, it needs to fashion a strategic planning framework that defines specific military goals to pursue, sets priorities among alternative concepts and programs, and brings coherence to a wide variety of concrete measures. This framework must be visionary, powerful and appealing enough to command the political commitment of all member nations. It also needs to be militarily sound, and based on solid analysis. It must promise positive results on the battlefield, where deterrence is forged.

Creating a strategic planning framework that can perform these important political and military functions is a task as complex as it is important. Over the past few years, fortunately, NATO has made major strides in this direction by developing new concepts in military doctrine, force employment, weapon systems, and investment programs. But much remains to be done in sorting them out and shaping them into a cohesive whole.

This paper endeavors to help NATO in this regard by identifying, in militarily meaningful terms, the defense purposes to which it should be aspiring in the Center Region. It begins by examining why NATO, in order to execute better its military strategy, should strive to replace its present "initial" conventional defense capability with a more "robust" posture. Next, it analyzes alternative employment concepts for building a robust defense, and particularly discusses why NATO should continue emphasizing a forward posture rather than adopt a mobile defense or cross-border operations. It then analyzes the complex issue of what program priorities NATO should pursue to prepare for the maneuver war that the Soviets intend to wage in Central Europe. It calls for a balanced combination of measures composed not only of high technology systems but also such traditional "nuts and bolts" programs as reserve mobilization, terrain enhancement, and airbase improvements. Finally, it proposes a resource and investment strategy that employs available funds along with cost-saving measures for executing these programs.

This paper, therefore, links broad judgments about policy and strategy to the particulars of programs and resources. It is exactly this linkage that NATO's planning process badly needs to establish, but is hard pressed to accomplish. This paper thus aims at developing the coherent and viable sense of direction that the Alliance needs in order to prepare its conventional forces for the 1990's and beyond.

THE ROLE OF CONVENTIONAL DEFENSE IN NATO'S MILITARY STRATEGY

An analysis of NATO's conventional defense plans must begin by addressing a fundamental issue: as a matter of military strategy, why and exactly to what degree does the Alliance need stronger conventional defenses? This issue is more than just academic. NATO's improvement efforts are lagging for reasons more basic than such otherwise solvable problems as fiscal constraints, preoccupation with other issues, and inertia. While the United States favors a stronger posture, many of the European allies still question its need and even its desirability. Until the entire Alliance agrees that a better posture is sine qua non for its strategy, any major buildup initiative is likely to fail because not enough allies will fully support it.

Failure would certainly run contrary to the expressed wishes of many senior NATO officials. In 1978, NATO's leaders, meeting at the Washington Summit, publicly called for a stronger conventional defense and launched the "Long Term Defense Plan" to achieve it. While NATO largely focused on the LRINF issue over the next few years, it began switching its attention back to the conventional balance once the Pershing II/GLCM decision was taken. At summit meetings since then, its leaders have issued calls for better conventional defenses, and its foreign and defense ministers, in their meetings, have echoed the same theme. Secretary of Defense Weinberger has been especially vocal about his concern for NATO's conventional defenses, and he has been joined by a chorus of other NATO officials, including SACEUR and Secretary General Lord Carrington. The cause of conventional defense thus has not lacked champions at high levels.

Such high-level statements normally might be expected to galvanize the Alliance into action. To be sure, they have triggered some encouraging steps including the launching of the "Conventional Defense Improvement" (CDI) effort and increases in infrastructure funding, ammunition stocks, aircraft shelters, and armaments cooperation. But so far these measures have had only a modest net effect.

The core reason for this sluggish response is that many NATO allies share a continuing belief in the deterrent power of nuclear weapons. They are not, of course, wholly indifferent to conventional defenses. Some are more interested than others, and within every country, conventional defense has strong backers. But a ruling majority in most nations remains content to rely primarily on nuclear weapons to deter all forms of enemy aggression. They tend to believe that NATO needs only moderate conventional strength : enough to handle lesser contingencies and make nuclear retaliation viable in a major war. They are willing to provide adequate fiscal support for this kind of posture. But they see no major need for the difficult, costly efforts required to field a conventional posture capable of defense in its own right. Until they change their views, they likely will continue to resist pleas and pressures to do much more.

A latent debate thus exists about NATO's military needs for conventional forces that is inhibiting prospects for a more vigorous buildup. Ideally, the Alliance should be able to turn to its official military strategy of "flexibility in response" (MC 14/3) to resolve this debate. Unfortunately, it cannot do so for the strategy itself is ambiguous on this issue. When adopted in 1967, it replaced MC 14/2, which had viewed nuclear weapons as the backbone of NATO strategy and sought only modest conventional forces that would function merely as a "tripwire". MC 14/3 established a new strategy of direct defense and deliberate escalation that called for a stronger conventional posture. But it did not specify clearly the exact conventional strength now required. MC 14/3 left this critical matter open, where it remains today. Before it can resolve its debate about its future forces, the Alliance thus must clarify the role that conventional defense plays in its strategy.

MC 14/3's ambiguity can best be illustrated by briefly describing its central features. It established an operational concept for planning that called for an "initial" conventional defense to be waged in the forward areas. In the Center Region, it emphasized defense along the West German frontier and ruled out MC 14/2's retrograde tactics that would trade space for time. MC 14/3 called for an active-duty, deployed, immediately available posture strong enough to stop a limited, "short warning" attack in its tracks. This would compel the Soviets to prepare fully and then attack "en masse", which would give NATO valuable time to prepare. NATO would be able to reinforce by deploying more U.S. forces from across the Atlantic and otherwise prepare for war.

Against the large, sustained attack that the Warsaw Pact could launch after mobilizing, MC 14/3 hoped that NATO's now-reinforced posture could defend forward at least temporarily. Militarily, this initial defense could hope to deny the Soviets a quick victory, and would delay NATO's need to escalate. But MC 14/3 also recognized that, probably, NATO's forces eventually would be worn down, driven back, and faced with defeat. Unless otherwise checked, the Warsaw Pact then would be free to drive deep into West Germany and reach the Rhine River or beyond. MC 14/3 concluded that while this defense effort would complicate Soviet plans, it alone could not deter them if they were willing to pay for success. MC 14/3, accordingly, continued to rely on nuclear escalation for this purpose. It called on the nuclear forces to provide the extra, still important, increment of required deterrent power that its conventional posture lacked. It aimed at preserving deterrence through a "triad" of conventional, theater nuclear, and strategic nuclear forces.

MC 14/3, moreover, carefully reserved NATO's right to escalate at a time of its own choosing: at the moment of impending defeat or even before. It hoped that this threat of escalation, aided by ambiguity on timing, not only would enhance deterrence but also would help the conventional defense. By keeping the Soviets uncertain about NATO's nuclear plans, it hoped to compel the Soviets to disperse their forces, thereby inhibiting them from concentrating in ways needed to defeat NATO. MC 14/3 looked to the conventional forces to help the nuclear forces as well. It expected them to defend forward long enough to clarify Soviet intentions, to make the Pact's victory costly, to weaken their ability to fight a nuclear war, and to give NATO enough time to make the decision to escalate. It called on NATO's nuclear and conventional forces to safeguard deterrence by working together in mutually reinforcing fashion.

This operational concept, by design, was left sufficiently general to justify a wide range of conventional postures. The specific posture chosen, at any particular time, would depend upon subsequent decisions regarding exactly where, under MC 14/3's auspices, conventional defense was to leave off and nuclear deterrence was to begin. This concept had the twin virtues of accommodating, or at least not precluding, the views of all members while giving NATO broad flexibility in preparing both its nuclear and conventional forces.

MC 14/3 clearly called for an improved posture that could execute this concept at least minimally. Drawing on the NATO-wide consensus for a buildup of this magnitude, it firmly pointed the Alliance, over the next few years, at this target. For the long term, it did not freeze the buildup at this minimum level. It left open long range goals, and the yet-unresolved issue of whether NATO later should strive for an even greater capability. It also did not define ultimate aims. It did not identify the degree of initial defense and staying power that a conventional posture ideally suited to the strategy would provide, and what would be the distribution of responsibility between this posture and the nuclear forces. This issue; too, it left open.

MC 14/3 thus defined a floor for sizing NATO's forces but not a ceiling. While it encouraged the Alliance to start realistically, it allowed room to grow and did not discourage higher goals by any nation. It left the Alliance free later to aspire to whatever point along the continuum of stronger defenses that its ambitions permitted, and to adjust its plans upward as time passed by. Having established a viable defense concept with a broad range of plausible force requirements, it left the critical programming details to be worked out in NATO's official planning process. In doing so, it gave the Alliance the opportunity to review its decisions every two years and make them afresh in response to new strategic conditions.

This decision to let the Alliance evolve future plans was wise in light of the debate then raging on this issue and alive today. NATO was able to put behind it a divisive strategy debate and to get on with the agreed task of improving its posture. Since then, the NATO nations have worked effectively together on this task, with the United States often leading the way and many allies making major contributions. Interest in conventional defense has grown steadily and, as a result, NATO's posture today is much stronger than the one existing in 1967.

The Alliance's efforts have now reached the point where its current posture, albeit falling short of NATO's present Force Goals, arguably satisfies MC 14/3 at least minimally. But "minimum" might not be enough in the years ahead, particularly given growing limits on the deterrent power of nuclear weapons. In order to determine the forces it needs for the future, NATO first must decide upon the goals to which it now should aspire. What are to be NATO's official planning aims for the next decade?

DETERRENCE AND THE MILITARY NEED FOR STRONGER CONVENTIONAL FORCES

In addressing this issue, we must first analyze whether, and to what extent, NATO should continue to rely on escalation to thwart conventional aggression. The "No First Use" (NFU) school, of course, proposes not to do so at all. It asserts that nuclear war is so uncontrollable and destructive that the Alliance no longer should risk using nuclear weapons to stop an enemy conventional advance. NFU would relegate nuclear forces solely to the role of deterring a nuclear war, and would deter non-nuclear attack by having NATO improve its conventional forces to the point where they could fully defend against it. When confronted with this strong NATO posture, NFU calculates, the Soviets would see no advantage to starting a conventional war. By maintaining deterrence while reducing its dangerous reliance on nuclear weapons, NATO thus would be able "have its cake and eat it too".

Few military strategists would quarrel with NFU's basic premise that nuclear war should be avoided at almost all costs and initiated only "in extremis". This is one reason why MC 14/3 was adopted. In calling for a better conventional defense, it was aimed not only at enhancing deterrence but also at providing NATO options other than an inevitable, early use of nuclear weapons. But MC 14/3 stopped well short of totally renouncing nuclear weapons for conventional deterrence, and the Alliance understandably shows little official interest in NFU today.

One reason for this disinterest, of course, is that most members' faith in nuclear weapons has remained unshaken despite NFU's ministrations. Beyond that, NATO simply is unable to build the kind of conventional posture that is essential to put NFU into place: one that can preclude defeat. As a practical matter, the Warsaw Pact's strength and NATO's fiscal constraints prohibit it. In defense planning, moreover, complete confidence can never be achieved no matter how well-prepared the force posture. Combat is driven by too many dynamics other than raw military power, including luck. Even if NATO built a conventional posture as large as the Pact's (or larger), it still would face a risk that the Pact would prevail in a war.

All of NATO's nations are aware of these military realities. To many, NFU therefore would imply a strategy change more basic than just building NATO's conventional forces in order to reduce the risks of escalation. Many would be concerned that NATO was altering the commitment to each nation's security that binds it together. Many also would fear that U.S. resolve to defend West Europe had weakened and that U.S. nuclear weapons were now decoupled from NATO's strategy. Nations with no national nuclear forces, including West Germany, would feel particularly exposed. Equally bad, in their eyes, NFU would send the Soviets a public signal that the Alliance is now prepared to sacrifice some of its territory to a conventional invasion rather than expose all nations, including the Soviets, to the risks of nuclear war. They likely would conclude that NFU not only erodes the commitment to collective security but also weakens deterrence.

The allies' reaction probably would not take the desired form of a conventional buildup; they are likely to take this step only if the nuclear deterrent remains fully intact. NFU likely would produce, instead, an unravelling of the Alliance, major trans-Atlantic discord, further proliferation, and national foreign policies aimed at dealing directly with the Soviets. The end result easily could be a West Europe less stable and more vulnerable to Soviet encroachment. The risk of war and nuclear escalation might well increase, rather than diminish.

For these reasons, NATO's strategy should remain based on the principles that security is indivisible and that freedom is worth whatever price must be paid to preserve it. The Alliance cannot carry its concern for avoiding escalation to the point where it no longer is willing to use nuclear weapons to defend against a conventional attack that itself would pose a grave threat to its vital interests. While reliance on nuclear escalation for conventional deterrence admittedly carries risk, the high stakes justify this risk.

If NFU is undesirable, why then should NATO strengthen its conventional defenses? The answer is that NATO today relies on its nuclear forces to an unduly high and unsafe degree. The primary risk is that the current posture, owing largely to its conventional weaknesses, might fail in its most important mission of deterring Soviet aggression in a crisis. Should war occur, the conventional forces also might then fail in their defense mission, thereby compelling NATO to escalate in premature and unwarranted ways. The net result could be a catastrophe for the Alliance. A NATO conventional buildup therefore is required for three, interelated purposes: to bolster deterrence, to improve the forward defense, and to reduce the risks of improper escalation. In all three areas, NATO needs a greater margin of safety than it enjoys today.

Deterrence clearly is an irreducible standard by which NATO's strategy must be judged. While the current posture has achieved deterrence thus far, the future is a genuine concern. The root problem is that the deterrent power of nuclear weapons against conventional attack, already declining when MC 14/3 was adopted, is likely to diminish further as the Soviet military threat matures. NATO must come to grips with this reality.

The primary reason for this declining deterrent power is that NATO no longer is able to employ nuclear weapons to decisive military advantage against the Soviets. While NATO still might be better able to employ nuclear weapons tactically, on the battlefield, this advantage quickly could be neutralized in a theater or intercontinental exchange. Since the Soviets today are capable of matching NATO along virtually the entire ladder of escalation, the best NATO could expect militarily is a standoff. Since NATO cannot plan to translate a conventional defeat into military victory by escalating, it cannot hope to deter the Soviets by this prospect.

There is virtually no chance that this situation will change in the foreseeable future. Offensive force modernization on both sides is expected to unfold in symmetrical ways; NATO is not expected to acquire any militarily-exploitable advantages. Defensive changes also are unlikely to alter this equation. The kind of SDI deployment that could make NATO's nuclear weapons usable militarily is far off: well into the next century. Even then, the Soviets might have an offsetting SDI system of their own. Nor is arms control likely to change things. The "deep cuts" discussed at Reyjavik would leave both sides with smaller, but still equal nuclear forces. If anything, SDI and arms control, individually or together, are likely to preserve the importance of the conventional balance and reduce the ability of nuclear weapons to affect it in ways favoring either side.

NATO's nuclear weapons, now and in the future, can best achieve deterrence primarily through an entirely different mechanism: by inspiring fear, in Soviet eyes, that a nuclear exchange could lead to massive destruction to the Soviet homeland and elsewhere. In creating this fear, they can help shape Soviet expectations regarding the outcome of a war and the sensibility of starting one in the first place. They can hope to deter by making the risks and potential costs of war appear to far outweigh, to the Soviets, any rational calculus of gains likely to be made from trying to conquer West Europe.

NATO's threat to use nuclear weapons, in this regard, clearly is a powerful and fully credible deterrent to a Soviet nuclear attack. In this case, the Soviets, by themselves crossing the nuclear threshold, would make a NATO nuclear response inevitable. Whether NATO's nuclear threat would deter a Soviet conventional attack is another matter. Unfortunately, the onus of nuclear escalation would be on NATO's shoulders, not the Soviets'. At issue here is not whether NATO actually would escalate in this circumstance, but whether NATO's threat to escalate, made prior to war, would be credible enough to the

Soviets to deter them from attacking, conventionally, in the first place.

This issue turns entirely on Soviet perceptions. While NATO's military strategy and forces clearly would give the Soviets serious pause, they could not eliminate the wrenching uncertainty that Alliance leaders would feel in the actual situation. Nor could they alter the Soviets' ability, in advance, to sense the dilemmas facing NATO's leaders. There is a risk that, knowing this, the Soviets might discount NATO's intent, at the decisive moment, to escalate. They might calculate that NATO, in the final analysis, would back away from escalation and accommodate itself to a Soviet victory rather than risk destruction. They might conclude that they could launch a conventional attack with impunity, or that the stakes at least justify testing NATO's resolve.

We are uncertain about how the Soviets currently assess the complex psychological dynamics of deterrence. Their military programs, however, suggest clearly that they take seriously the possibility of defeating NATO entirely by non-nuclear means. Twenty years ago, their forces were configured almost exclusively for nuclear war and lacked the wherewithal for a full, sustained conventional campaign. Since then, the Soviets and their allies have been making a major, costly effort to reconfigure them for a conventional war as well. This historic effort to recast their strategy and forces for war in Europe is now coming to fruition.

Today, the Warsaw Pact's forces already are sufficiently large, equipped, and oriented to fight a conventional campaign against NATO aimed at victory. They continue to be improved further with new weapons as fast as Soviet factories can produce them, as well as new tactics and concepts for conventional fighting. They are being structured with the better command & control, infantry, tactical air, air defense, and logistic forces needed for the complex, combined arms operations conducted on the modern battlefield. They clearly are being designed to support a military strategy that calls for conventional fighting well beyond the "initial forward defense" envisioned by MC 14/3. They are being prepared to defeat NATO quickly, decisively, and entirely by conventional means alone.

More than likely, the Soviets themselves do not know how a war would unfold and whether it would escalate. The choice, after all, is not entirely theirs to make. The fact that they also are building stronger nuclear forces suggests that they are preparing for both nuclear and conventional war, without prejudging the outcome. But they have no incentive to start a nuclear war, and they would not be making this huge investment in conventional forces, costing billions of rubles, if they believed that victory by these means was impossible or even unlikely. Investment programs, because they consume scarce resources, are often unmistakable signs of national intent. The weight of their investments suggests that the Soviets already are discounting heavily NATO's willingness to escalate.

Whether NATO's policy of relying on nuclear weapons would discourage the Soviets from actually using this posture in a crisis is an open question. But NATO can know, in advance, that its vulnerable conventional posture removes one critical impediment to Soviet decisionmaking: major uncertainty about whether a conventional attack itself might fail. Beyond that, it further suggests that since NATO did not have the willpower to build stronger conventional defenses, it might not have the resolve to escalate. All things considered, its conventional weakness seriously erodes deterrence in ways that strong nuclear forces cannot offset.

A stronger conventional defense thus is needed, in more than merely marginal ways, to ensure deterrence: a goal of MC 14/3 for which compromises cannot be made. It is needed both to deny the Soviets confidence that they actually can win a conventional war and to make NATO's threat to escalate more credible. Credibility is built, in peacetime, by vigorous defense programs that signal the seriousness of the Alliance's intent to defend its vital interests. A weak conventional posture does not suggest a willingness to escalate by virtue of shortsightedly leaving NATO with no alternative. It merely suggests that NATO, unwilling to attend to its defense needs in peacetime, might not fully defend itself in wartime.

A better conventional defense also would contribute to the other worthy goal, endorsed by MC 14/3 as well as NFU, of reducing the risk that the Alliance will be compelled by its conventional inadequacies to escalate in undesirable ways. The purpose of nuclear escalation by NATO presumably would be to terminate war on acceptable terms by convincing the Soviets to desist their attack. But the act of crossing the nuclear threshold, especially if done indiscriminately, could set off military dynamics that are not well-understood and might lead to massive destruction to NATO as well as the Warsaw Pact. While the Alliance should not shrink from escalating to protect itself, neither should it unnecessarily expose itself to these risks.

MC 14/3, for this reason, calls for escalation as a deliberate act, not as a desparate step brought about by the absence of alternatives. In executing MC 14/3, NATO should aim to have the flexibility to escalate in controlled and limited ways. More important, it always should have a choice between conventional defense and crossing the nuclear threshold. It should strive to place the onus of nuclear escalation on the Warsaw Pact's shoulders, where it belongs.

The present vulnerability of its conventional forces, however, could place the onus on NATO's shoulders, where it does not belong. It could leave NATO in the position of having to decide between nuclear war, with all its risks, and military defeat, with all its losses. A buildup of NATO's conventional forces could help reverse this undesirable situation, and thereby compel the Soviets to face their own difficult choice: between a cease fire, with no strategic gains, and a nuclear war that could lead to their own destruction. It could help ensure that, if nuclear war occurs, it is an outgrowth of the Warsaw Pact's uncompromising intent to alter the status quo rather than NATO's lack of alternatives to protect itself. Even more important, it could help ensure that war, conventional or nuclear, will not occur at all.

A "ROBUST" DEFENSE AND ITS ROLE IN NATO'S MILITARY STRATEGY

The reasons underlying NATO's need to bolster its conventional defenses thus derive as much from strategy considerations as from a purely technical appraisal of the military balance. They give rise to the question of whether NATO needs to alter MC 14/3 itself. Will MC 14/3 continue to suffice, or does NATO need an MC 14/4? This analysis believes that since MC 14/3 continues to enjoy Alliance consensus and remains mostly valid, it should be retained. The only issue under debate is NATO's conventional defenses, and it can be resolved without calling the strategy into question. While the Alliance thus can avoid a troublesome debate on strategy fundamentals that would only delay further force improvements, it does need to revise its understanding of the kind of conventional posture it requires under MC 14/3. It cannot settle any longer for a posture that, by design, can only execute MC 14/3 minimally and defend initially. But to what alternative, better posture should NATO aspire? What should be NATO's design concept?

It is apparent that the Alliance realistically cannot aspire to an impregnable posture: one that could guarantee a solid forward conventional defense against any threat the Soviets could mount. But NATO can, and should, aim for a posture that does more than merely delay a Warsaw Pact advance and impose a high price on a Soviet victory. This analysis believes that NATO's goal should be to erect a defense that raises serious doubts, in Soviet eyes, about the likelihood of victory itself, especially in the first phase of fighting. In essence, NATO's posture should be strong enough, by itself, to pose a major deterrent to conventional aggression.

A posture that meets this standard can be labelled "robust": while not being immune to defeat, it could withstand major shocks and still would be unlikely to crumble. Above all, a robust posture would not be brittle in the early days. It would be unlikely to shatter or unravel in the face of Soviet attempts to fracture it quickly and decisively. It would be capable of meeting the enemy's initial onslaught and holding its ground. Unlike the present posture, it confidently could absorb the intense opening pulse of war and remain intact.

It also would have greater staying power than the current posture, and probably more than NATO's present goal. But its endurance would be gauged in broader terms than the size of its war reserves. It would be measured by the posture's ability to remain cohesive and defend forward in the face of steady Soviet pressures to dislodge it. This posture might not have indefinite logistic sustainability, or even be able to match the Soviets in war reserves. But it would be able to remain fully competitive on the battlefield throughout the Soviets' entire initial phase of operational maneuver. Normally, this would last a month or two. But time is not the issue here: the concept is what matters. The posture would be able to defend successfully at least until the Warsaw Pact attack expends its initial energy, begins to lose momentum, and must pause to regroup.

A robust posture, providing early defense and staying power along these lines, would "defang" the Warsaw Pact threat in decisive ways. It would deny the Soviets their high priority goal of winning during the only stage of war that can be foreseen with any confidence. It would confront them instead with stalemate and heavy losses: the antithesis of the quick win their strategy now seeks. The Soviets would face the prospect of gaining victory only by a traditional campaign of several, successive battles: a process that is unpredictable, especially since NATO would be able to mobilize fully and the United States could deploy its large ground reserves. The net effect would be to complicate greatly Soviet plans, to the point of making conventional war considerably less viable than now.

A robust posture thus would not provide NATO complete confidence in its defenses or remove entirely its reliance on nuclear weapons. But it would enhance deterrence by significantly increasing the costs, risks, and uncertainties that the Soviets would face in a conventional war. By deterring better, a robust posture also would permit NATO to relegate its nuclear forces to the more limited role that they should play in its strategy for the future. It would allow the nuclear forces to provide backup support to the conventional posture rather than being the principal means of deterring conventional war that they are now. A robust posture thus would enable NATO to replace its unwise faith in the deterrent power of nuclear weapons with a truly justified confidence that deterrence is, indeed, intact.

THE CENTER REGION MILITARY BALANCE AND THE THREAT OF MANEUVER WAR

If NATO were to commit itself to building a robust posture over the next decade, the agenda ahead doubtless would be a demanding one. It would require Alliance-wide commitment to objectives that are beyond the plans of most members as well as some NATO Force Goals. It also would require major innovations in force structures, weapon systems, and operational plans. Equally important, it would compel NATO's members to learn how fully to fight together as a coalition. None of these tasks are easy ones.

A robust defense, nonetheless, is an achievable goal, but only if NATO focuses specifically on denying the Soviets the kind of war they intend to fight in Central Europe. The key to building a robust defense lies in deploying a revised NATO posture that can frustrate the Warsaw Pact's strategy of breakthough and maneuver. Adoption of any other focus or, worse, no focus at all, likely would leave NATO militarily vulnerable even if it accelerates its improvement efforts. The agenda ahead thus is more complicated than just building better forces; it also is one of planning well. NATO needs to identify accurately the military threat it faces and then creatively tailor its forces to defeat it. While the Alliance already has taken the initial steps in this direction, it needs to do more.

Present Status of NATO's Forces. A robust posture would not have been a feasible goal 20 years ago, when the weak force NATO inherited from MC 14/2 made necessary the pursuit of more modest goals. But over the past two decades, NATO has made major progress in bolstering its Center Region defenses. NATO today, consequently, is within striking range of a robust posture, if it uses its resources wisely.

The major strides NATO has taken since 1967 are often overlooked in overly negative appraisals of the NATO-Warsaw Pact balance, which seem fixated on Soviet gains. Among NATO's most overlooked and most favorable gains has been the emergence of the West German Army as a large, first class force. Prior to the FRG's rearmament, NATO did not have nearly enough forces to contemplate a serious conventional defense. The creation and steady maturing of the FRG's Field Army, reserve Territorial Army, and Air Force has altered this situation. As these forces continue to be strengthened with programs now underway, NATO's defense capability will increase further.

The steps that the United States has taken, in tandem, to strengthen its military contribution to NATO have reinforced this trend. Ever since the Vietnam War ended, the United States has been steadily improving its deployed ground and tacair forces in Europe. It has invested heavily in a host of modernization, readiness, and sustainability measures, and has better tailored them for armored combat there. It also has invested in major POMCUS, COBs, and strategic lift programs for speedily deploying

U.S.-based reinforcements to Europe. Started by Presidents Ford and Carter and continued by Reagan, these programs will be completed in a few years. They will enable the United States quickly to deploy fully 10 combat divisions and 60 tactical fighter squadrons, including the vital III Corps for use in NORTHAG. These heavily armed and highly ready U.S. forces will add enormously to NATO's strength.

In responding to MC 14/3, many other Center Region allies also have made improvements to their forces that have gone largely unnoticed by the public. The United Kingdom especially has worked hard to strengthen its forces. While deficiencies still exist among Dutch, Belgian, and Danish forces, they have improved to the point where, today, they are capable at least of defending their forward corps sectors. Finally, the growing capability of French forces is noteworthy. Although not a member of NATO's integrated military structure, France has shown renewed interest in NATO's defenses in recent years. Commitment of the French First Army, which seems likely in a crisis, would add important reserves to NATO's posture.

All allied and U.S. forces particularly have benefitted by the deployment of new technology for anti-armor warfare. Twenty years ago, NATO had no effective means to defend against the Warsaw Pact's larger armored forces. Since then, NATO has deployed hundreds of new tanks and armored fighting vehicles, anti-tank guided missiles, attack helicopters, anti-armor artillery munitions, modern tactical aircraft and better air munitions. These new weapons have given NATO's forces the firepower and lethality they need to defend against massed armored assaults. Armored combat in Central Europe is no longer dominated entirely by tanks, and is no longer the Soviets' province.

The combined effect of these force improvements in size, quality, and anti-armor capability, aided by parallel gains in interoperability and harmonization of doctrine, has been to bolster fundamentally NATO's conventional defense prospects. While NATO's forces under MC 14/2 were too ill-prepared for anything more than a phased withdrawal, today they are able to mount a serious forward defense effort across the entire Center Region. Compared to 1967, they would be a much tougher nut for the Soviets to crack. They provide a strong foundation for building a robust defense.

Linear Defense and Attrition War. NATO's improvements, indeed, already have come to the point where an enemy victory is not foreordained: much depends on how the war is fought. In order to win, the Soviets would have to ensure that it is waged on their terms: in ways that enable them fully to use their strengths and to capitalize on NATO's vulnerabilities. Otherwise, they might fare less well, and NATO, much better. The outcome thus hinges on whether the Soviets succeed in this regard or NATO foils them.

Surface appearances, of course, suggest that the military balance is so one-sided that the Soviets will win regardless of what kind of war is fought. Figuring heavily in this appearance of massive Soviet superiority is the Warsaw Pact's ability to field some 90 ground divisions after only a few weeks while NATO could respond with only about 45 division equivalents. NATO therefore would be outnumbered by 2:1 in divisions, by even more in tanks and artillery, and would have to defend on terrain that provides several avenues for high speed enemy armored advances. Taking only these factors into account, the Alliance's prospects do appear dim.

But appearances can be deceiving, and these numerical advantages, in themselves, do not translate automatically into a Soviet victory. One important reason is that the military balance is more complicated than a simple comparison of division flags, units, and selected weapons would suggest. For example, NATO's divisions generally are larger than the Warsaw Pact's. Comparably armed in tanks and artillery, they normally have greater manpower, more infantry, more weapons in other categories (e.g., mortars and infantry fighting vehicles), larger C3I assets, and better rear area service support. In essence, they have a better "combined arms" capability than Warsaw Pact divisions that, despite recent improvements, still are not as fully structured as NATO's units. They would benefit, furthermore, from assistance provided by NATO's equally large and qualitatively better tactical air forces, which steadily are acquiring improved capabilities for influencing the ground battle. Taking these factors into account, the military balance is closer than appears at first glance.

Beyond this, NATO does not exactly have to match the Warsaw Pact in total weapons and force size. While numerical disparity becomes unmanageable beyond a certain point, a defensive force often can fight outnumbered to some degree. This particularly is the case if the defender is fighting on defensible terrain, has established its positions, remains cohesive and conducts a coordinated defense, and benefits from good leadership, high readiness, and strong morale. Indeed, these factors are so important in Central Europe that the initial force ratio, within limits, probably is not the most important issue in evaluating NATO's defenses. What matters more is whether NATO's posture meets the military requirements of its strategy, which derive as much from density, force-to-space, training, doctrine and mission considerations as from the enemy threat. While NATO's forces do not adequately meet these requirements, they are not so deficient that a forward defense effort is doomed to failure irrespective of how the Soviets conduct their attack.

NATO's forces probably would best acquit themselves in the unlikely event the Soviets were to launch a "broad front" attack. In this case, the Soviets would spread their forces evenly along the front and attempt to drive NATO's forces back and destroy them in a series of grinding battles akin to Grant's march on Richmond. Combat between the two sides would take the form of a set-piece, slow-moving attrition war driven by firepower, exchange rates, and sustainability. The outcome would turn on which side first reached exhaustion; the Soviets presumably would hope that, owing to superior numbers, they could outlast NATO.

Against this attack, NATO could mount the forward, linear defense that its strategy and forces are designed to conduct. NATO's forces would be able to establish a single, cohesive defense line on familiar terrain, behind prepared positions and with protected flanks. They could focus their lethal anti-armor weapons and high artillery fire rates along predictable, frontal axes of attack. In conducting a carefully planned, coordinated defense, they also would be able fully to use their strong C3I, service support, and tactical air assets. They would be in a good position to inflict major losses on the Warsaw Pact, while reducing their own attrition and replacing losses through repair and war reserves. Like Lee at Fredericksburg-- a Confederate victory that badly bloodied the Union Army-- they would enjoy all the classical advantages of being on the defense.

While war is impossible to predict, NATO, if things went smoothly, might well outlast the Warsaw Pact. The Soviets might find themselves bogged down in the forward areas, far short of victory, with a badly depleted posture no longer capable of advancing and vulnerable to a NATO counter-thrust. Presently, NATO's ammunition and war reserve stocks may be too low to fight and win a linear attrition war this way. But they are growing steadily, and will be considerably more adequate within a few years. NATO's modern munitions, moreover, are becoming so lethal that they are reducing partially the need for high volumes of fire, especially in artillery and anti-tank missiles. The net result is that if NATO's forces do not now have the capability to stop a Soviet broad front attack in its tracks, they are well on their way to developing it.

Maneuver War. The Soviets doubtless are aware of NATO's growing capability for linear, attrition warfare. In reaction, they increasingly have been preparing their forces to execute a more demanding but more lucrative strategy of "breakthrough and maneuver": the polar opposite of a broad front attack. In this strategy, apparently, the Soviets first would try to soften up NATO with massive tactical air strikes against rear targets, especially air bases and command centers. They then would hurl their large ground forces against NATO's weakened defenses. But instead of spreading their forces evenly along the inter-German border, they evidently would concentrate at selected sectors and attack only lightly elsewhere.

In these sectors, Warsaw Pact forces would advance in successive waves of echeloned formations and would try quickly to punch through NATO's forward defenses there. Once through, their tank forces, aided by Operational Maneuver Groups (OMGs), airmobile, and airborne forces clearing the way, would advance rapidly into the rear areas and fan out. If left unchecked, they could maneuver at will. They either could drive deep into West Germany and destroy NATO's military infrastucture, or envelop NATO's forward-deployed forces, or both. They would have a wide range of options open to them, all of which would offer rich opportunities for severely disrupting NATO.

This strategy tries to avoid the teeth of NATO's defenses while striking at their achilles heel. It aims at using maneuver dynamics to set the stage for a series of violent, climactic battles that, in contrast to a broad front attack, would be fought under conditions highly favorable to the Warsaw Pact. This strategy uses maneuver only as a means to an end; attrition remains the final arbiter. But it regards maneuver as a central element of its operational art. It uses maneuver not only as a device to bypass NATO's strong forward defenses, but also to bring about an explosive shattering of NATO's entire posture. It views maneuver as the dynamic element that, if done successfully, can enable the Warsaw Pact to sweep NATO from the battlefield.

This strategy's operational scheme requires a complex choreography that, while vulnerable to disruption and risky, also offers an elegant plan for decisive victory. As an illustration, the Soviets, by driving through NATO's forward defense line and maneuvering in the rear areas, would strive to fracture the cohesiveness of NATO's posture and divide its combat forces from one another. They also would hope to separate NATO's combat forces from their logistic support and to compel them to retreat, in disorganized fashion, from their prepared positions at the front. With NATO's posture thus dislocated, the Soviets then would attempt to maneuver their forces from one tactical engagement to the next. In each case, they would try to confront an isolated portion of NATO's forces with larger Warsaw Pact forces and destroy them in swirling meeting engagements. Their goal would be to defeat all of NATO's forces this way, in detail.

A successful Soviet offensive along these lines could rupture NATO's forces in ways that seriously degrade their combat power. If the Soviets were able to gain and exploit major breakthroughs, NATO's forces at best would be hard pressed to conduct a coordinated defense. At worst, they could be compelled to give battle in the meeting engagements that the Soviets wisely seek. Outnumbered, isolated, and possibly demoralized in this case, they could be highly vulnerable. If all things went well for the Soviets, the net result, in theory, could be a quick and decisive victory for them, far beyond the likely payoffs from a broad front attack.

Reality, of course, often is different from theory, and events might unfold less ideally than Soviet plans envision. History shows, nonetheless, that this strategy is based on sound military reasoning and can be executed by a well-prepared force. Ceteris paribus, a maneuver strategy helps the attacker strip away many of the advantages that otherwise arise from being on the defense. At least from Napoleon onward, there are many cases in which an attacking force has used these maneuver tactics to unravel and destroy a defender, even a larger one. The same dynamics that worked then could apply now. In World War II, the Soviets saw maneuver warfare from both sides and have a large reservoir of experience to draw upon. They clearly intend to execute this strategy in a war against NATO, and are steadily bringing their force posture into alignment with it. The threat of maneuver warfare they pose to NATO thus is no illusion.

This threat is made more serious by deficiencies in NATO's posture that leave it vulnerable to a Soviet maneuver strategy. NATO's most worrisome problem is that it lacks sufficient operational reserves to provide adequate depth to its defenses. Since most of its forces would be deployed at the front to establish a viable defense line, NATO, even after U.S. reinforcement, would be able to retain only U.S. III Corps, the French First Army, and a few other units in the rear. These forces are too small to meet the requirements for reserves that easily could arise.

While a defender might not require depth in a linear attrition war, sizable operational reserves are critically important against a maneuver strategy. They provide a means to prevent enemy formations from penetrating beyond the front line. Their function is to help the defense control the key breakthrough battles, in which the attacker tries to transform a linear attrition war at the front into a maneuver war in the rear. If large enough and employed correctly, they can enable a defender to foil an attacker's maneuver strategy. But in their absence, the defender is very vulnerable.

NATO's reserves might be sufficient during the early stages, especially once U.S. III Corps is available for use in NORTHAG, where NATO's defenses are weakest. But as the war unfolds, these forces are likely to be depleted or drawn into the front line to cover its lengthening, which often occurs in a manuever war, and to replace losses. Eventually, they might no longer of be able to contain the multiple penetrations that are likely to occur as enemy forces advance, their own reserves are committed, and NATO's forward defenses are weakened.

In the event of enemy breakthroughs, additional NATO vulnerabilities could then come into play as the Alliance struggles to fight a complex maneuver war. For example, NATO would have to coordinate the actions of eight different national armies as well as the combined operations of its air and ground forces, tasks that are considerably more difficult to accomplish in maneuver combat. Also, key NATO supply lines and north-south roads often run close to the forward areas and could be cut by relatively shallow Soviet penetrations. Deeper enemy advances could reach major supply depots, command centers, and tactical air bases that, owing to lack of depth, are located primarily in West Germany. The net effect would be to weaken NATO's defenses at the moment when maximum strength is most needed.

Even if NATO fully retained its logistic support and tactical air forces, it probably would not be able to employ them effectively. A large portion of NATO's support forces primarily provide sustaining power in a long war and would not contribute importantly in maneuver operations, which are dominated by rapid movement and short meeting engagements. The impact of NATO's air strikes against enemy supply dumps and other rear targets would be similarly neutralized: they would have little immediate impact on enemy operations. NATO's air forces would be compelled instead to operate largely against the enemy's ground combat forces, which could be harder to discern and destroy on the manuever battlefield. In such a war, NATO thus would have to rely primarily on its ground combat forces, which would fight in conditions ideally suited to the Soviets.

This appraisal is not meant to imply that NATO's forces would be wholly incapable in a maneuver war. Even if dislocated and inefficiently supported, they still would have the mobility and modern weaponry to give a tough fight. The Warsaw Pact's forces, moreover, have limitations that could hamper them; their C3I system as well as their ability to improvise are major question marks. Individually, they are not likely to outclass NATO's forces. The principal but uncomfortably high risk is that, unaided by a prepared and cohesive defense, NATO might be swamped by the Warsaw Pact's larger numbers.

MOBILE DEFENSE OR CROSS-BORDER OPERATIONS?

How can NATO best build a robust posture that can control the dynamics of a war and foil the Soviets' maneuver strategy? In particular, should NATO preserve its present forward defense and improve upon it, or should it abandon this approach entirely by fighting a maneuver war of its own? We will address these questions by first examining two concepts that offer maneuver-oriented alternatives to forward defense: mobile defense and cross border operations. Albeit based on plausible military theory, their surface appeal wanes when they are examined in the context of NATO's situation. By analyzing them, however, we can set the stage for discussing innovative programs to strengthen and diversify the forward defense that NATO should be pursuing.

A mobile defense would try to redress NATO's lack of depth by shifting its "center of gravity" from the front line to the rear areas. The forward defenses would only screen and hold, and would cease to be NATO's primary vehicle for stopping an attack. Armored operational reserves, instead, would play this role. NATO presumably would form the sizable reserves needed for this concept by withdrawing armored divisions from the front line and deploying them in the rear areas. These divisions would be used mainly in counterattacks against Soviet breakthrough salients, which hopefully would become exposed as enemy forces drive into NATO territory. The aim of these counterattacks would be to block Soviet penetrations and destroy their forces with flanking attacks. In essence, NATO would try to turn maneuver warfare against the Soviets and defeat them at their own game.

While this concept often is faulted on the grounds that it would weaken NATO's political commitment to defend its forward areas, its military virtues often are taken for granted. Pointing to historical cases in which outnumbered defenders have used mobile tactics to halt enemy advances, its advocates argue that NATO should be able to do the same. Some, indeed, seem to regard mobile defense as a panacea. Their enthusiasm, however, is not shared universally. While recognizing that NATO's posture needs greater depth, its critics regard a purely mobile defense, with plausibly achievable forces, as having serious military drawbacks of its own. Quite apart from its political liabilities, they question this strategy, on military grounds alone, as a basis for building or employing NATO's forces.

At issue in their debate is whether, and to what degree, NATO should sacrifice the advantages of a prepared forward defense in order to bolster its rear area strength. The weight of analysis, in this paper's view, is against mobile defense, at least in its pure form. In itself, the idea of using armored counterattacks to defeat enemy breakthroughs is sound, as long as the defender's reserves are capable of winning the critical battles in the rear. Also, the Center Region, public impressions to the contrary, provides enough territorial depth to defend this way. Mobile defense, technically, thus is also a viable option. Its real problem is that even a mobile defense requires more than just strong reserves. It also requires forces to perform other missions as well; in their absence, the reserves cannot function effectively. The mobile defense concept, as applied to NATO, breaks down on these grounds.

In order to form the large reserves required by this concept, NATO would have to denude too seriously its front line. While small withdrawals could safely be made, large redeployments could do major damage because the remaining forces would be spread very thin. In addition to being unable to execute the present plan for forward defense, they might also be incapable of performing the less demanding, but still essential missions required by the mobile defense concept itself.

For example, NATO's forward defenses might be left too weak to prevent the Soviets from reverting to a broad front attack and making major headway. NATO might then find itself unable even to trigger the rear area battles that are central to the mobile defense. Instead, NATO might be compelled, in piecemeal fashion, to reintroduce its forces back into the defense line in order to stem the Soviet advance. In the process, it might dissipate its combat power, never massing enough forces at the front or the rear to stop the Soviets. By mismanaging force employments this way, a mobile defense might help bring about defeat in the very linear attrition war that NATO seems best able to fight.

An additional risk is that, if the enemy does concentrate, NATO's front line might allow too many simultaneous breakthroughs for the reserves to handle. A mobile defense would work only if the forward defenses limit breakthroughs to manageable size, thereby allowing NATO's reserves to achieve decisive force advantages in the rear areas. Otherwise, NATO's reserves could find themselves swamped by larger Warsaw Pact forces. In this case, mobile defense would fail in its goal of turning maneuver warfare against the Soviets. By stripping NATO of the advantages of a positional defense and fostering the very war that the Soviets seek out, it would have exactly the opposite effect.

These military risks suggest that mobile defense is hardly a doctrinal cure-all for NATO's defense ills. Its advocates too readily discount the advantages of a prepared, frontal defense and too easily assume that a wholly mobile defense will work as advertised. In the process, they overlook the roadblocks to fighting this way and the counteractions available to the Soviets. They particularly fail to recognize that NATO needs a balanced combination of strong forward defenses and agile reserves that interact closely. One cannot function without the other. In placing unduly high emphasis on defense-in-depth while not providing adequately for forward strength, the mobile defense concept would violate this need for balance.

In the final analysis, mobile defense runs afoul of NATO's lack of adequate combat forces and the need to maintain a strong forward line to support all employment strategies. In evaluating NATO's priorities in this regard, it is noteworthy that military planners historically, when facing similar conditions, normally have not opted for a mobile defense even when this option was open to them. They generally have tried to create a combined posture that is anchored firmly on a powerful front line and uses mobile tactics only as a supplement. Their rationale has been to preserve the advantages of a frontal defense while still having enough reserves to prevent the enemy from bypassing its main strengths. They have resorted to a fully mobile defense only when the front to be defended was too large to be covered and/or the enemy was relatively unskilled in maneuver battles. These conditions applied to the German Army on the Russian front in World War II, and to the Israelis in recent Middle Eastern wars: cases in which mobile defense was both necessary and effective. But they do not apply to NATO today.

In fact, precisely the opposite conditions apply in the Center Region. NATO is not compelled by geography to adopt mobile defense; the terrain, only one-third as long as the Russian front and rough in many areas, is definitely defensible. Nor should it be drawn to mobile defense by any obvious superiority in its ability to fight maneuver battles. Since today's Soviet forces are skilled in mobile combat, NATO cannot have the same optimism that the Germans brought to the Russian front. These conditions argue against a purely mobile defense and favor the more traditional approach.

In summary, while NATO needs to solve its rear area problems and cannot rely on a purely forward posture, mobile defense is not the answer. It does, of course, offer important insights that NATO should draw upon. The Alliance, for example, should constantly review its operational plans to ensure that it is witholding as many reserves as possible and is using them imaginatively. In its programming, NATO should try harder to field more combat forces and deploy them to the rear areas, where they are badly needed. But in carrying out these recommendations, NATO should stop well short of fully embracing mobile defense. It carries a good idea too far.

Like mobile defense, the idea of cross-border operations also seeks to turn maneuver warfare against the Soviets. But instead of using NATO's armored reserves in the rear areas, it would employ them in offensive operations into enemy territory.

For example, in the event of a massed Warsaw Pact attack against NORTHAG, CENTAG's forces, in response, might drive into East Germany. Their aims presumably would be to cut Soviet supply lines, to compel the Soviets to draw forces away from NORTHAG, and to seize targets of value. In doing so, their ultimate goal would be to unhinge the Soviets' offensive.

This concept thus far has been debated, in the public literature, primarily on political and strategic grounds. Among other things, its critics especially question the wisdom of NATO, in peacetime, publicly declaring its willingness to violate the inter-German border in wartime. Its advocates counter that while the goals of NATO's military strategy should be defensive, the Warsaw Pact should not necessarily be granted a territorial sanctuary if it attacks NATO. While this debate needs to be resolved within NATO circles, an equally important issue is purely military: even if politically feasible, does this idea make military sense for NATO?

In this paper's view, this idea offers many of the attractive features of a mobile defense, but also all its drawbacks, only more so. In some situations, to be sure, NATO might find it advisable to undertake limited, purely tactical cross-border strikes as part of its forward defense plan. But the Alliance simply does not have sufficient combat forces to risk major operations of this sort. While the results cannot be predicted, the prevailing military balance alone suggests that NATO probably would find its sledding tough. Since the Soviets have ample forces both to prosecute an offensive and to protect their rear, they should be able not only to check NATO's advance but also to turn it to their advantage. In all likelihood, NATO's advance would bog down well short of its goals with major losses along the way, and with AFCENT left significantly more vulnerable to invasion. The net result, all too easily, could be a serious weakening of NATO's defense prospects.

Recent history supports this conclusion. Defending armies, when outgunned, generally have not fared well by attacking the enemy. For example, the Germans lost heavily by attacking in the 1944 Battle of the Bulge, an operation that closely parallels the kind of attack that NATO might launch today. In this case, an army well-schooled in maneuver lost because the allies had ample forces to absorb this attack and eventually destroy it. While Israeli attacks against Arab armies are often cited as examples to the contrary, the Israelis normally were not locally outgunned and always enjoyed major quality advantages over their enemies. The Center Region balance, unfortunately, bears a closer resemblance to Western Europe in late 1944 than to the Middle East today.

This critique is not meant to imply that NATO absolutely should rule out cross border operations; indeed, it should develop a purely contingency capability to do them. This step would complicate Soviet plans while enabling NATO to pursue this alternative should an opportunity unexpectedly present itself. But NATO should not make them the basis of its force planning or employment strategy. A fundamental principle of military planning, which certainly applies to NATO today, is to be prudently conservative when forces are scarce. Risky operations should be avoided when they are as likely to produce disaster as success, and could play directly into the enemy's hand. This concept violates this unglamorous, but sound principle.

BUILDING BLOCKS FOR A ROBUST DEFENSE: COMBINATION MEASURES AND SYNERGY

The drawbacks of these two concepts suggest that NATO should not try to foil the Soviets by fostering a maneuver war of its own. It would be best off continuing to anchor itself on a strong forward defense that tries to compel the Soviets to fight on its own terms. At the same time, NATO cannot continue relying on its present posture, which is vulnerable to the Soviets' strategy. Accordingly, it needs to broaden its planning. It needs, this analysis believes, to build a posture that, while still based on a forward defense, can also checkmate Soviet breakthrough efforts. By denying the Soviets the maneuver war they seek, this posture would enable NATO to fight the war it is best prepared to wage.

No single new concept or weapon system will give NATO this kind of posture: it can be built only through a combination of measures. The Alliance particularly should pursue measures in three broad areas. While improvements in each area individually would make NATO's posture more resilient to enemy armored assaults, their most important contribution would derive from their interaction. By working together, they would have a synergistic effect. They include:

o Measures that enhance the ability of NATO's present ground forces to employ not only firepower, but also mobility and maneuver, in conducting the forward battles.

o Programs, including FOFA systems, that better enable NATO's air forces to disrupt and destroy enemy armored reserves before they reach the battle area.

o Measures to add more ground combat forces in Reserve Component status, thereby creating more operational reserves that can be witheld from the front line and used to contain breakthroughs.

Strengthening the Forward Defenses. In recent years, programs for improving NATO's ground forces largely have focused on acquiring new weapons to replace outdated models. NATO has done well in meeting its Force Goals, and this effort clearly should continue until all U.S. and allied forces have full complements of modern systems. Investment programs especially should focus on weapons that can penetrate modern Soviet armor as well as on rocket and missile systems (e.g., MLRS/ATACMS) that can provide long range, operational fires against enemy formations. NATO also should continue acquiring ammunition stocks and war reserves to meet approved goals. Completion of these programs, many of which already are included in present country plans, will strengthen NATO's ability to generate the massive, highly lethal firepower that is critical to its forward defense.

In addition to buying more weapons, NATO needs to pay equal attention to learning how to use them effectively. In this regard, NATO should intensify its already-serious efforts to enhance the ability of its ground forces to maneuver. The growing attention that its planners have been paying to maneuver warfare is founded on the correct assumption that a defending army's combat power is determined by more than its mechanical ability to generate large volumes of fire. Even when fighting from a positional defense, NATO's forces can, and must, show mastery of the operational art. They cannot hope to contain Soviet breakthrough efforts simply by bathing advancing enemy forces in firepower while themselves ignoring maneuver dynamics.

For NATO, the operational art involves quickly massing forces at the point of breakthroughs and employing them adroitly, using maneuver tactics to unhinge the enemy's forces and destroy them. It entails use of maneuver as a force-multiplying means by which NATO can employ its firepower to full advantage, while denying the Soviets the opportunity to bring their forces to bear. Its goal is to shape and prosecute breakthrough battles so that NATO, even while fighting outnumbered, can win them. Mastery of this art fortunately will not require new weapons; the modern models now being bought are mostly adequate for this purpose. NATO, however, will need to develop appropriate operational plans and to train its forces to execute them. It also will need to develop C3I and logistic systems that can support a maneuver doctrine; in both areas, NATO forces are still configured primarily for linear attrition warfare and will require major changes in their ways of doing business.

The U.S. Army has been making excellent progress toward these goals in developing its AirLand Battle doctrine, as have allied forces, which also are stressing maneuver tactics. Their efforts need to be broadened beyond purely national measures so that AFCENT develops an inetgrated capability to employ maneuver a theater-wide basis. For example, AFCENT needs to become fully skilled at maneuvering U.S. III Corps to support allied forces in NORTHAG, and to use the French First Army to support CENTAG. It also will have to become efficient at using CENTAG's forces to aid besieged NORTHAG forces, and vice versa. This requirement to fight a theater-wide maneuver defense necessitates major progress in Alliance coalition planning. While NATO already has initiated impressive plans and programs in this area, they now need to be brought to fruition.

In preparing a maneuver-oriented defense, NATO also should examine seriously the option of making selective preparations of the terrain. For political and military reasons, major field fortifications of the sort suggesting a Maginot Line are not in order. More moderate, low cost measures, however, could make important military contributions while being politically unobtrusive. Potential candidates include planting explosive pipelines that create anti-tank ditches, prechambering of key bridges and roads, and sculpturing of the terrain to make it less passable to enemy armor.

History and analysis suggest that terrain enhancement measures of this sort can enormously aid a defender, even when employing tactical maneuver. In themselves, terrain enhancements pose only a minor nuisance to an enemy equipped with combat engineers and bridging equipment. But when covered by defensive fire, they can dramatically slow the enemy's advance, disrupt his tactics, and enable NATO to extract a higher toll. They also can help NATO maneuver better by enabling it to hold positions with fewer forces, create more operational reserves, and channel the enemy's forces in ways that expose them to counterattacks. By helping shape the maneuver battle's dynamics, they could help prevent the enemy from achieving breakthroughs, while better enabling NATO to control them, when they occur.

While NATO presently relies on its military engineers to begin preparing the terrain upon mobilization, they could not make much progress if, as expected, warning time is low. Peacetime preparations, even done slowly over several years, could reduce this problem. Although these measures are not now included in NATO Force Goals, they are inexpensive; a full program, covering all the major attack corridors in AFCENT, would not appreciably disrupt member nation budgets. Definitely affordable and unquestionably effective, they provide a high leverage way for NATO to strengthen its defenses.

In addition to preparing the terrain, NATO also should re-examine the structures of its ground forces in order to better configure them for maneuver combat. Although allied forces are reasonably well equipped, selective additions of artillery, anti-tank weapons, and electronic warfare systems might usefully enhance their combined arms capability. Increased use of allied reserve infantry, armed with light weapons and deployed in forests and towns, might further enhance the forward defense while enabling allied armor to focus more exclusively on major invasion corridors. Even small force structure changes in these areas might materially improve allied forces.

While the U.S. Army's ground forces are among NATO's best armed and supported, changes to them also might be in order. The Army's present structure establishes its center of gravity forward, in large divisions and brigades. This structure was designed primarily to execute the previous doctrine of linear defense based on firepower, and took effect before the current emphasis on maneuver. As a result, Army divisions, due to their large size, might lack agility, and the Army corps, versatility. The U.S. Army, accordingly, should examine options for shifting its center of gravity to the corps, and to configure it with larger numbers of smaller divisions. A new structure, along these lines, might enable U.S. Army forces to make even greater contributions to NATO's defenses.

FOFA and Tactical Air Forces. While these measures should better enable NATO's ground forces to defeat the Soviets' "first echelon" --the roughly 50 divisions initially committed--they would not be enough to stop follow-up attacks by the remaining 40 divisions of the "second echelon". The urgent need to deal with these 2d echelon forces has led NATO to begin developing "FOFA" (Follow-On Forces Attack): a tactical concept that relies on a set of high technology systems in C3I, avionics, missiles, and munitions. These systems are specifically intended to improve NATO's ability to destroy enemy forces at long range: in the rear areas, well before they arrive at the FLOT. While FOFA includes the Army's ATACMs missile, it primarily is focused on NATO's air forces, and especially their ability to strike deep. When coupled with already existing systems for close air support, FOFA, in theory, would enable NATO to subject the 2d echelon to a rising crescendo of delay-inducing, lethal air and missile harassment as it approaches the battle area.

Ever since it was introduced a few years ago, FOFA has attracted considerable public fanfare; the technical community has been especially enthusiastic about it. This widespread approval notwithstanding, the verdict is still out about whether its performance will accord with its promises. To date, FOFA primarily is a planning concept; its technologies have not yet been fully developed, much less operationally tested. As a result, major uncertainty exists about its feasibility and effectiveness. FOFA also will be costly; if fully funded, it could consume up to 20% of investment funds for air forces over the coming decade. Aware of these concerns and facing hard decisions on how much they should spend on FOFA and what they can expect of it, most NATO nations are pursuing it more cautiously than its advocates prefer.

While this analysis is no better able than these nations to assist in making these judgments, it does note that the task of preparing NATO's air forces is larger than simply developing FOFA. The Alliance also must ensure that its airbases can survive enemy air and missile attacks, and that its support forces can maintain proper sortie rates. Further, its air forces must win the air battle, disrupt enemy airbases, and suppress enemy air defenses. If they fail in any of these areas, they will be hard-pressed either to operate at a high tempo or to maintain control of AFCENT airspace, both of which are necessary if they are to contribute to the ground battle.

Consequently, FOFA should not become a sole preoccupation; NATO needs to invest its resources in a balanced way that also makes necessary improvements in these other, equally important areas. Provided it does so, FOFA's promise and importance fully justify a well-funded program to deploy those systems that meet cost-effective standards, as well as related measures for enhancing anti-armor strikes near the FLOT itself. U.S. air forces, which already have the advanced aircraft and doctrine for deep strikes, particularly should pursue these measures. Since allied air forces have somewhat different priorities, their efforts inevitably will lag behind. Progress by both the United States and the allies, nonetheless, is important if NATO is to succeed in using its air forces to their full potential.

Even as it pursues FOFA, NATO should not be under the illusion that its air and missile forces can become strong enough to solve its ground problems. If FOFA is successful, these forces will be better able to delay and destroy the enemy's 2d echelon, but not to the point of rendering it incapable of exploiting an early breakthrough, should it occur. This, simply, is too much to ask. Among the constraints affecting NATO's air forces is the need to perform other missions that constantly will consume many sorties. As a result, only a limited portion of NATO's combat aircraft will be available for strikes against the 2d echelon. These aircraft will be subject to enemy countermeasures and will be attacking very difficult targets: e.g., armored vehicles, which are small and hard to destroy short of a direct hit. While FOFA munitions are designed to provide greater lethality against these targets, practical impediments inevitably will prevent them from operating as effectively as advertised.

If given enough time, FOFA's forces still might be able to render the 2d echelon impotent, but they are unlikely to get it. The physical mechanics of attrition and the intensity of modern combat suggest that NATO's present ground forces will become vulnerable to breakthroughs after only about two weeks of conflict, and possibly less. This period is too brief for FOFA, whose effects build gradually, to work its magic. Since they have ample reserves to absorb major losses and still carry on, the Soviets are capable of winning this deadly race by punching through NATO's too-brittle defenses before they are consumed by NATO's lethal firepower.

Reserve Mobilization. This harsh reality suggests that NATO cannot hope to remedy its vulnerability to the enemy's 2d echelon forces solely by enhancing its firepower for destroying them. NATO also will have to increase the survivability of its ground defenses by addressing directly their core problem: lack of adequate depth. It will need to field more ground combat forces that can function as the additional operational reserves that its posture badly needs. Only by taking this admittedly difficult step will NATO confidently be able to control the breakthroughs that are still likely to occur regardless of other improvement measures. Indeed, it must take this step in order to benefit fully from these other improvements, most of which qualitatively enhance the present forces. In absence of minimally adequate quantity, quality cannot do its work.

Fortunately, the Alliance does not require a major force expansion, which would be unaffordable. An increase of only 3-6 divisions substantially would enlarge AFCENT's operational reserves, greatly complicate Soviet plans, and elongate NATO's staying power. Nor does NATO need to deploy fully active units, which would be too expensive. It instead could field Reserve Component forces, which cost only one-third the amount of active units. Since they need not be ready on M-Day and would be expected to fight mostly enemy reserve forces that require equivalent time to mobilize and train, they should be fully adequate for NATO's purposes. A program to deploy 3-6 reserve divisions (or the equivalent in brigades) thus appears to be both militarily sound and affordable.

The need to deploy more reserve forces already has been recognized as a high priority measure in the CDI, and is codified by the NATO Force Goals, which call for a program of this magnitude. The military requirement for these forces thus is not in dispute; the issue simply is one of execution. Apart from the FRG's laudable efforts to equip already existing reserve brigades with older weapons being retired from its active forces, the Alliance unfortunately is doing little to improve in this critical area. In this regard, its investment priorities are askew. They need to be altered.

The resources, fortunately, are available to do more. Although the allies face major demographic constraints on meeting active manpower requirements, they have ample pools of unassigned reserve manpower to form more units. While equipment presently is in short supply, it can be acquired through imaginative planning. For example, the FRG's practice of handing down used but still effective weapons can serve as a NATO-wide model for the future. By starting with infantry forces and then adding armored equipment as it becomes available, while also drawing on excess U.S. equipment for foreign sale, the allies should be able to make major progress over the next ten years.

Improvement programs in this area need not be restricted to the allies. U.S. participation would help militarily while serving as an example to galvanize greater allied efforts. In recent years, the United States has been taking steps to involve its reserve forces in NATO defense planning; examples include participation by some units in Reforger and other CPX and FTX exercises. Further steps along these lines, including programs to increase reserve readiness and speed their deployment, probably could be taken without undue fiscal strain. By taking them, the United States could help lead a coalition effort to remedy one of NATO's most important and pressing deficiencies.

Synergy. The measures outlined here would significantly strengthen NATO's conventional defense by replacing its present posture, which is powerful only along the forward defense line, with three strong tiers of resistance: lethal deep strikes, strong forward defenses, and large operational reserves. The combined impact of these measures likely would be synergistic rather than merely additive: greater than the sum of improvements taken independently. Synergy would occur because these tiers would be able to work together in closely cooperating fashion. The strength of each, relative to the enemy, would be enhanced further by the better operational support it receives from the other two.

The forward defenses, for example, would be better able to perform their missions as a result of the greater support they would receive from the tactical air and rear area support forces. FOFA-enhanced air and missile strikes would help prevent the enemy from massing against them, while larger operational reserves would help prevent the enemy from exploiting breakthroughs that could unravel them. By fighting effectively, the forward defenses, in turn, would give FOFA more time to bring its firepower to bear while easing the reserves' task by allowing fewer penetrations. All three tiers thus would be able to fight under more favorable conditions than before, thereby enabling them to perform at their best while denying the Soviets any easy opportunity to neutralize them.

Taken together, these measures would decisively undercut the Soviets' maneuver strategy. They would enable NATO's forces to withstand intense pressures for a considerably longer period, thereby allowing them to subject enemy forces to the sustained gauntlet of firepower that could destroy them. By thus making NATO's forces far less brittle and significantly more lethal, they would help the Alliance confront the Soviets with a truly robust posture that should deny them any incentive to attack.

CONCLUSION:
RESOURCES AND INVESTMENT STRATEGY

A robust posture can be built only if the United States and the allies resolve to achieve it by collaborating together. It will not be attained if the United States succumbs to frustration by withdrawing its forces, or if the allies yield to domestic pressures and slacken their efforts. Since adverse action on one side of the Atlantic inevitably will weaken commitment on the other, all parties must approach burden-sharing in a positive spirit. Each NATO nation must ask not whether its partners are contributing their fair share, but whether it, itself, is doing the maximum possible on behalf of the common endeavor.

Even with a shared commitment to building a robust posture, the Alliance realistically will not be able to achieve it overnight. But if all parties make a concerted effort, this goal can be attained within a decade. The resource requirements of a robust posture, at least, are manageable within this period. For example, by fully meeting NATO's 3% standard for annual spending increases, the United States and the allies together would provide well over $2 trillion in this period: enough to fund about 90% of the required measures in the Center Region, while also attending to NATO's defenses on the flanks and at sea. By increasing annually at 2%--the allies' average recently--NATO could still fund about 85% of these measures. By failing to spend more, however, NATO's nations would sharply constrain their improvement efforts. In this case, they could pursue only about 75% of the required measures. The Alliance not only would fail to achieve a robust posture, but almost certainly would suffer a net deterioration in the military balance by virtue of failing to keep pace with Warsaw Pact improvements.

This agenda admittedly offers no immediate relief, on both sides of the Atlantic, from the burden of sustaining increases in defense spending broadly commensurate with the expected growth rates of national economies. But the fiscal costs of this agenda must be evaluated in light of the security conditions facing the Alliance. At present, NATO has the worst of both worlds: high defense spending and chronic insecurity. By spending only marginally more, it could achieve the security that all its nations require in order to prosper as they approach the 21st century. Seen in this context, the gains are well worth the costs.

Even as it makes available adequate resources, the Alliance also will have to make strong efforts to ensure that it manages them well. It particularly will need to invest scarce acquisition funds--research, development, procurement, and construction--in a balanced and intelligent way. In the recent past, NATO properly has placed highest priority on modernization and the advanced technologies it brings. In order to fund the measures suggested here, NATO will now need to place co-equal emphasis on the other three pillars of defense preparedness: readiness, sustainability, and force expansion. Only by building all four pillars can the Alliance erect a truly solid force posture.

NATO also will need aggressively to pursue major cost-saving measures, a difficult task that any alliance of sovereign nations is hard-pressed to accomplish. The Alliance, as many observers have stressed, cannot continue to afford the luxury of redundancy and overlap in its use of scarce resources. For this reason, it should pursue more vigorously such measures as multinational logistics planning, "division of labor" specialization in forces and missions, and armaments cooperation. This analysis suggests that, if present spending patterns prevail, the Alliance should aim for measures that cut present costs by as much as 10-15%: enough to make up the likely difference between fiscal resources and requirements. But even if undertaken in smaller steps, these measures offer high leverage ways not only to save resources but also to improve the military effectiveness of NATO's forces.

Provided it commits itself to the goal of a robust defense posture, makes available adequate resources, and uses them well, NATO's future can be bright. The Alliance has been a resounding success for the past 40 years, and by no means is condemned to a future of decay. Should it fail to do so, however, its future might well be as bleak as some of its critics contend.

In this regard, Disraeli, when asked to distinguish between misfortune and catastrophe, quipped "It would be a misfortune if Gladstone fell into the Thames River; but if someone pulled him out, now that would be a catastrophe". This is a useful, if graphic, distinction. While the Alliance's failure thus far to build an adequate conventional defense merely has been a misfortune, the past is not necessarily prologue. Continued failure by NATO to address its compelling defense needs might well be catastrophic, even worse than Gladstone's being pulled prematurely from the Thames. Thankfully, the Alliance has other options. It merely must make a sustained commitment to its fundamental purposes.

Senator Levin. Thank you, Dr. Kugler.

Dr. Epstein.

STATEMENT OF JOSHUA M. EPSTEIN, SENIOR FELLOW, THE BROOKINGS INSTITUTION, WASHINGTON, DC, AND VISITING LECTURER, WOODROW WILSON SCHOOL, PRINCETON UNIVERSITY

Dr. Epstein. Thank you, Senator. It is a pleasure to be invited to testify today.

Senator Levin. Would you pull your microphone a bit closer, please.

Dr. Epstein. Sure.

As the arms control and defense budget debates progress, we will all be regaled with a great many numerical comparisons between forces of NATO and the Warsaw Pact. We have already been regaled with some.

The first and main point I would like to make is that static side-by-side enumerations of peacetime inventories—tanks, planes, any of these indices—do not constitute assessments of the conventional military balance, in Europe or anywhere else.

A close accounting of each side's pre-battle forces is obviously necessary to any assessment of war-fighting capability, but such accounting alone is not sufficient. Warfare is a dynamic process, in which the opposed forces grind each other up and move around; a process whose pace, duration, and outcome depend critically on factors that simply cannot be captured in any static accounting, no matter how balanced.

Some of these factors are obvious: technology; training and troop skill; command, control, communications and intelligence; reconnaissance and targeting capabilities; relative concealment and exposure; logistics; force-to-space constraints; reliability of allies; readiness; warning and surprise; the relative willingness to suffer attrition and yield territory; asymmetries in goals and tactics.

The glaring absence of such factors from all static input comparisons would lead one to suspect what is, in fact, the case: bean counts of this type are extremely poor predictors of military outcomes.

Empirically, numerical superiority, at least in troop strength, is neither a necessary nor sufficient condition for battlefield victory. Notably, smaller forces won at Austerlitz, Antietam, Fredericksburg, Chancellorsville, the Battle of Frontiers, the Fall of France, the Invasion of Russia, the North Korean Invasion, the Sinai, the Golan Heights, and, recently, in the Falklands.

Bean counting is pseudo-empiricism. Bean counters offer many numbers, but no combat data to support the implications we are invited to draw.

Not only is it lacking in empirical support, but reliance on bean counting is quite inconsistent. Neither the Pentagon nor the Congress actually behave as though numerical equality mattered. If either did, it would be frantically shoveling money out of aircraft carriers, where we lead 14 to 1, and into tanks, rather than stretching out the latter in order to increase our lead in carriers.

It is similarly inconsistent to spend billions on support structures, command control and logistics for U.S. ground forces, and them to assess the conventional balance as though sheer weapon ratios were all that mattered.

Overall, the NATO deploys twice as many support personnel per weapon operator as the Pact, and comparing a U.S. corps to a Soviet army, the United States deploys nearly 2½ times as many command and control personnel per weapon operator as the Soviets.

Now, you cannot have it both ways. If the only thing that matters is the bean count, then the United States should stop spending on support, command and control, and the like. But if these support assets are worth what we are devoting to them in people and treasure, then their contributions should be reflected in our measures of effectiveness, and they are not. Their absence biases the most even-handed comparisons against NATO.

For example, after withholding, that is, subtracting, very substantial forces for non-NATO contingencies—and I will tell you exactly what they are later—the Warsaw Pact's advantage over NATO in armored division equivalents, after a full mobilization and deployment, is on the order of 1½ to 1.

But, if one assumes that NATO's support structures provide marginal returns in lethality equal to their manpower opportunity costs, that is, shooters foregone, the effective ADE scores of U.S. armored forces grow by 40 to 50 percent, and the Pact's edge shrinks accordingly.

Command and control and other support structures are just some of the factors absent from the numerical comparisons that typically pass for analysis.

There are others. Some of them favor NATO. America's allies are more reliable than those of the Soviet Union. Western active duty units generally receive more training than Warsaw Pact units, and the training is, by and large, much more realistic. It draws on more combat experience, and the accumulated expertise of militarily skillful friends, like Israel.

According to the JCS, NATO enjoys a substantial technological lead in many critical areas. General Gabriel, when he was Air Force Chief of Staff, stated that the Russians were 10 years from having planes comparable to the U.S. F–15 and F–16. Historically, these qualitative factors have loomed larger than mere numbers in determining outcomes. The asymmetry is especially pronounced in air-to-air combat.

Some data on World War II and the Pacific: U.S. pilots downed 10 planes for every one they lost. In the Middle East War of 1967, the same ratio was 20-to-1; in 1973, 40-to-1; in Lebanon, over 80-to-1.

Technological advantages and differences in pilot skill underlie these disparities.

Now, it would be imprudent to assume NATO-Pact exchange ratios at the high end of this spectrum, but it is unduly pessimistic to assume that the Pact's modest numerical edge should somehow nullify NATO's superior, much more extensive, training and its continuing technological lead.

Turning to the matter of ground engagements, we are all familiar with Clausewitz's famous dictum that the defensive is intrinsically stronger than the offensive. One advantage NATO enjoys as defender is the opportunity to fight with relative concealment, from prepared or even lightly fortified positions. The attackers have to come out into the open, exposing themselves to fire, in order to advance.

Another defensive advantage is the opportunity to fight on familiar terrain, and that can be exploited to force or canalize Soviet armor into poor tank country.

Instant antitank ditches, terrain enhancement, prechambering of bridges, and other low technology inexpensive initiatives, can exacerbate such Soviet problems and increase the effectiveness of advanced direct fire weaponry by forcing the Soviets to stop, increasing their exposure to defensive fire.

Where such advantages apply, defenders who do not mismanage their resources ought to be able to extract favorable ratios of attackers killed per defenders killed.

According to the Pentagon's own "Soviet Military Power," the Soviets military inventories in part, and I quote, "reflect the offensive nature of Soviet military doctrine and strategy in that attacking forces are believed to require at least a 5 to 1 force ratio in anticipation of high losses inherent in offensive operations."

Even if, in raw firepower, NATO were outweighed to such a degree—and it most certainly is not—geographic constraints would most likely prevent the Soviets from amassing local force ratios of such magnitudes. Only so much force can be concentrated on a given sector of battlefront. Recent Army analyses have highlighted these so-called force to space constraints, and have led General Glenn Otis, Commander of U.S. Army Forces in Europe, to cut by half the Soviet force he expects his army group to engage initially. "They are not all going to be shooting at once because of the terrain and geographic limitations." This reasoning underlies the general's claim that with "the total NATO capability available to Central Army Group, the first echelon of the Soviet forces is going to have a whale of a time doing anything to us."

Now, he is talking about the first echelon of Soviet forces, and, as is often noted, at some point, quantity does acquire a quality all its own. Ultimately, with enough force, one side can simply crush the other.

But that is not the situation.

In fact on my current estimate, after withholding ten and two thirds U.S. army division equivalents and all Marine Corps units, and assuming a 4 day lag in NATO's response to warning, a full NATO-Pact mobilization, including the Soviet second and third echelons, would result in a Pact advantage of less than 1.5 to 1 in ADEs. Moreover, at no point in that mobilization would the ratio exceed 2 to 1.

Now, I do not place faith in these simple ratio or rules of thumb about them. These numbers are imputs to the combat process, and they are inputs to the dynamic combat simulations I use to assess the balance.

Another imput excluded from all these ratios is close air support, which operates directly against attacking armor and favors NATO.

By my estimate, the Alliance is capable of fielding over 1,500 fixed wing and helicopter close air support planes for a central European war. As an illustration of their potential impact, even if one assumes low sortie rates—two a day—high constant rates of attrition per sortie—5 percent—and moderate numbers of Pact armored fighting vehicles—tanks and armored personnel carriers—moderate numbers of those vehicles killed per surviving plane per sortie—half a vehicle kill per sortie—a force of 1,500 planes could destroy 13,594 vehicles in a 30 day campaign.

This is over 11 divisions worth.

The Pact fields a smaller and less effective close air support force, which I assess by the same methodology.

Now, none of these factors that I have been discussing—force ratios, close air forces, qualitative differences and so forth, when viewed in isolation, are grounds for judgment about the balance overall. They have to be integrated into some model of the combat process, one that represents in a conservative and plausible way, the mutual attrition of engaged forces, the follow of reinforcing units into the battle, and the movement of battlefronts over time.

Such dynamic assessments must be done over the full spectrum of Pact attacks, from the short mobilization thrust backed up by succeeding echelons, all the way up to the fully mobilized attack.

Brookings has published my entire methodology. It is all available. Having modeled many of these scenarios, my overall view is as stated in my Brookings 1988 defense budget monograph. NATO has the material wherewithal to stalemate the Warsaw Pact.

Now, "material wherewithal to stalemate" is a carefully crafted phrase. I am not sanguine about the balance, and there are ways for NATO to lose.

Failure to concentrate in a timely way is, of course, one of them. And there are also things NATO should do to boost its confidence of conventional defense.

While a successful forward defense is plausible today, there is very little room to spare, and no one, on either side of the Atlantic, should be under any illusions about the effect of a significant withdrawal of U.S. combat power.

When I run the same simulations with 100,000 U.S. combat troops withdrawn, NATO would be quickly forced to choose between capitulation and nuclear war. NATO does not do nearly as well if you pull out 100,000 U.S. combat troops.

Assessments showing NATO to be the Pact's equal today will also change if NATO fails to maintain its forces in an adequate state of readiness. Such assessments also assume that NATO would properly respond to warning of a Soviet attack, mobilize in a timely way, although with a lag, and be able to sustain nonnuclear operations.

All of my specific proposals and the analyses underlying them are set forth in my Brookings monograph, "The 1988 Defense Budget".

Overall, though, there is no reason why NATO, history's richest alliance, should fail to mount an imposing nonnuclear deterrent to conventional attack.

If the Alliance fails to do so, it will be through the misallocation of adequate resources; by over-investment in strategic forces at the expense of conventional, and within conventional, by over-investment in naval forces at the expense of the ground and tactical air forces responsible for the immediate defense of Western Europe.

After all, if NATO loses the war on land, surface naval superiority will be mighty cold comfort.

Thank you.

[The prepared statement of Dr. Epstein follows:]

Statement
of
Dr. Joshua M. Epstein

Senior Fellow, The Brookings Institution
on
The European Conventional Balance

As the arms control and defense budget debates progress, Congress will be regaled with a great many numerical comparisons between the forces of NATO and the Warsaw Pact. The first, and main, point I wish to make is that bean counts--static side-by-side enumerations--of peacetime military inventories of tanks, planes, and so forth do not constitute assessments of the conventional military balance in Europe or anywhere else. A close accounting of each side's prebattle forces is obviously necessary to any assessment of warfighting capability; but such accounting alone is far from sufficient. Warfare is a dynamic process in which the opposed forces grind each other down, a process whose pace and outcome depend crucially upon factors that simply cannot be captured in a bean count, no matter how balanced.

Some of these factors are obvious:

--Technology (weapons' quality)

--Training and troop skill

--Command, control, communications and intelligence

--Reconnaissance and targeting capabilities

--Relative concealment and exposure (use of terrain)

--Logistics

--Force-to-space constraints

--Reliability of allies

--Readiness

--Warning and surprise

--The relative willingness to suffer attrition and yield territory

--Asymmetries in goals and tactics

The glaring absence of such factors from static input comparisons would lead one to expect what is, in fact, the case: bean counts are extremely poor predictors of military outcomes. Empirically, numerical superiority--at least in troop strength--is neither a necessary nor sufficient condition for battlefield victory. Notably, the smaller force won at

--Austerlitz (1805);

--Antietam (1862); Fredericksburg (1862); Chancellorsville (1863);

--Battle of Frontiers (1914);

--The Fall of France (1940);

--The Invasion of Russia (Barbarossa, 1941);

--The North Korean Invasion (1950);

--The Sinai (1967);

--The Golan Heights (1967 and 1973); and recently, in

--The Falklands.

Bean counters are pseudo-empiricists. They offer many numbers, but no combat data to support the implication we are invited to draw.

Not only is it lacking in empirical support, but reliance on bean counting is quite inconsistent. Neither the Pentagon nor the Congress actually behave as though numerical equality mattered. If either did, it would be frantically shoveling money out of aircraft carriers--where we lead 14 to 1--and into tanks, rather than stretching out the latter in order to increase our lead in carriers.

It is similarly inconsistent to spend billions on support structures--C^3I and logistics--for U.S. ground forces and then to assess the conventional balance as though sheer weapon ratios were all that mattered. Overall, NATO deploys twice as many support personnel per weapon operator as the Pact. And, comparing a U.S. Corps to a Soviet Army, the U.S. deploys nearly 2 1/2 times as many C^3I personnel per weapon operator as the Soviets.

Now, one cannot have it both ways. If the only thing that matters is the bean count, then the U.S. should stop spending on support, command, and control. But if these support assets are worth what we are devoting to them--in people and treasure--then their contributions should be reflected in our measures of effectiveness. They aren't. And their absence biases the most even-handed comparisons against NATO.

For example, after withholding--subtracting--very substantial U.S. forces for non-NATO contingencies, the Warsaw Pact's advantage over NATO in Armored Division Equivalents (ADEs), after a full mobilization and deployment is on the order of 1.5 to 1 (see discussion below). But, if one assumes that NATO's support structures provide marginal returns (in lethality) equal to their manpower opportunity cost (shooters foregone), the effective ADE scores of U.S. armored forces grow by 40 to 50 percent, and the Pact's edge shrinks accordingly.

C^3I and other support structures are just some of the factors absent from the numerical comparisons that typically pass for analysis. There are others; some of them favor NATO.

America's allies are more reliable than the Soviet Union's. Western active-duty units generally receive more training than Warsaw Pact units, and Western training is by and large much more realistic. It draws on more combat experience and the accumulated expertise of militarily skillful friends--Israel, for example. According to the Joint Chiefs of Staff, NATO enjoys a substantial technological lead in many critical military areas. For instance, General Charles A. Gabriel, as Air Force chief of staff, stated that the Russians were ten years from having planes comparable to the U.S. F-15 and F-16.[1] Historically, such qualitative factors have loomed larger than mere numbers in determining outcomes.

The asymmetry is especially pronounced in air-to-air combat. In World War II American pilots in the Pacific theater lost only one plane for every ten Japanese planes they downed--an exchange ratio of 10:1. In the Middle East wars of 1967 (The Six-Day War) and 1973 (the Yom Kippur War) the

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[1] George C. Wilson, "Air Force Chief Denies Soviets Ahead in Space," Washington Post, June 18, 1986.

Israelis scored ratios of 20:1 and 40:1; in Lebanon in 1982 the ratio was more than 80:1. Technological advantages and differences in pilot skill underlie these disparities. It would be imprudent to assume NATO-Pact ratios at the high end of the spectrum, but it is unduly pessimistic to assume that the Pact's modest numerical edge should somehow nullify NATO's superior, and far more extensive, training and its continuing technological lead.

Turning to the matter of ground engagements, the great Prussian theorist Clausewitz held that "the defensive form of warfare is intrinsically stronger than the offensive." One advantage NATO enjoys as defender is the opportunity to fight with relative concealment from prepared--or even lightly fortified--positions. By contrast, the attacker must come into the open, exposing himself to fire, in order to advance. Another defensive advantage, the opportunity to fight on familiar terrain, can be exploited to force, or canalize, Soviet armor into poor tank country.

"Instant" antitank ditches, terrain modifications, prechambering of bridges, and other low-technology initiatives can exacerbate such Soviet problems and increase the effectiveness of advanced weaponry by forcing the Soviets to stop, increasing their exposure to defensive fire.

Where such advantages apply, defenders who do not mismanage their resources should be able to extract favorable ratios of attackers killed per defender killed--favorable exchange ratios. According to the fifth edition of the Pentagon's own Soviet Military Power, the Soviets' large military inventories in part "reflect the offensive nature of Soviet military doctrine and strategy in that attacking forces are believed to require at least a 5:1 force ratio in anticipation of high losses inherent in offensive operations."[2]

Even if, in raw firepower, NATO were outweighed to such a degree (and it most certainly is not), geographic constraints would most likely prevent the Soviets from amassing local force ratios of such magnitudes. Only so much force can be concentrated on a given sector of battlefront. Recent Army analyses have highlighted these so-called force-to-space constraints, and have led General Glenn K. Otis, Commander of U.S. Army Forces in Europe, to cut by half the Soviet force he expects his Army group to engaged initially: "they're not all going to be shooting at once because [of] the terrain and geographic limitations." This reasoning underlies the general's claim that with "the total NATO capability available to Central Army Group, the first echelon of the Soviet forces is going to have a whale of a time doing anything to us."[3]

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[2] Department of Defense, Soviet Military Power 5th ed., p. 63.

Now, as is often noted, at some point quantity acquires a quality all its own. Ultimately, with enough force, one side can crush the other. But that is not the situation. In fact, on my current estimate, after 9⅓ withholding ~~10~~ U.S. Army division equivalents and all Marine Corps units, and assuming a 4-day lag in NATO's response to warning, a full NATO-Pact Mobilization--including the Soviets' 2nd and 3rd echelons--would result in a Pact advantage of less than 1.5 to 1 in ADEs. Moreover, at no point in that mobilization would the ratio exceed 2 to 1.

Again, I do not place faith in these simple ratios. These numbers are just inputs to the combat process, and they are inputs to the dynamic combat simulations I use to assess the balance.

Another input, excluded from such ratios, is close air support (CAS), which operates directly against attacking armor, and favors NATO. By my current estimate, the Alliance is capable of fielding over 1500 fixed-wing and helicopter close air support aircraft for a Central European war. As an illustration of their potential impact, even if one assumes low sortie rates (2 per day), high constant rates of attrition per sortie (5 percent), and moderate numbers of Pact armored fighting vehicles (AFVs), such as tanks and armored personnel carriers (APCs), killed per surviving plane per sortie (0.5), a force of 1500 aircraft could destroy 13,594 AFVs in a 30-day campaign; that is over 11 divisions' worth. The Pact fields a smaller and less effective CAS force (whose impact I assess by the same methodology).

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[3] Charles D. Odorizzi and Benjamin F. Schemmer, "An Exclusive AFJ Interview with General Glenn K. Otis, Commander-in-Chief of the U.S. Army in Europe and Commander of NATO's Central Army Group," Armed Forces Journal International, vol. 124 (January 1987), pp. 46-47.

None of these factors I've been discussing--force ratios, close air forces, qualitative differences, and so forth--when viewed in isolation are grounds for judgment on the balance overall. They must be integrated into a model of the combat process, one that represents in a conservative and plausible way the mutual attrition of engaged forces, the flow of reinforcing units into battle, and the movement of battle fronts over time. And such dynamic assessments must be done over the spectrum of Pact attacks, from the short-mobilization thrust backed up by many succeeding echelons, all the way up to the fully-mobilized attack.

Brookings has published my entire methodology, and having modeled many of these scenarios, my overall view is as stated in the Brookings 1988 Defense Budget: "NATO has the material wherewithal to stalemate the Warsaw Pact."

Now, "material wherewithal to stalemate" is a carefully crafted phrase. I am not sanguine about the balance; there are ways for NATO to lose, and things NATO should do to boost its confidence of conventional defense.

While a successful conventional forward defense is plausible today, there is little room to spare. No one, on either side of the Atlantic should be under any illusions about the effect of a significant withdrawal of U.S. combat power. The withdrawal of 100,000 combat troops would be folly. NATO would be quickly forced to choose between capitulation and nuclear war.

Assessments showing NATO to be the Pact's equal today will also change if NATO fails to maintain its forces in a state of readiness. Such assessments also assume that NATO would properly respond to warning of a Soviet attack, mobilize in a timely way, and be able to sustain nonnuclear operations. Specific proposals, and the analyses underyling them, are set forth in my Brookings monograph, The 1988 Defense Budget, which I will submit for the record.

Overall, there is no reason why NATO, history's richest Alliance, should fail to mount an imposing non-nuclear deterrent to conventional attack. If the Alliance fails to do so, it will be through the misallocation of adequate resources: by over-investment in strategic forces at the expense of conventional, and, within conventional, by over-investment in naval forces at the expense of the ground and tactical air forces responsible for the immediate defense of Western Europe. After all, if NATO loses the war on land, surface naval superiority will be mighty cold comfort. Thank you.

Senator LEVIN. Dr. Epstein, thank you.

Let me just ask each of you a question.

Dr. Kugler, you please go first. Is there any factual statement that Dr. Epstein has made here that you disagree with today? I don't mean conclusion or tone—just a factual statement. I am going to ask him the same question about your testimony in a minute.

Dr. KUGLER. No, not really.

Let me, though, state my own perception of the ADE scores because they are a function of when in the buildup process you are looking.

On M Day, at the inter-German border, using the DOD planning scenario, the ratio of ADE scores probably would be 1.2 or 1.3 to 1, fairly low. Thereafter, it would quickly rise, until about at M plus 15, supposedly D Day, it would reach about 2 to 1.

Senator LEVIN. And then after that?

Dr. KUGLER. After that it would stay level, say for a month or so, until U.S. reinforcements begin arriving from the United States, and would decline slowly and steadily after that until, and Josh is absolutely correct in this, by the time deployment is completed, the ratio, assuming no attrition in the process, would be about 1.5 to 1.

Senator LEVIN. So, at the beginning it is 1.2, and you accept that.

Dr. KUGLER. Roughly.

Senator LEVIN. Then in its worst phase it is 2?

Dr. **Kugler**. Yes, sir.

Senator **Levin**. And then back down to 1.5?

Dr. **Kugler**. Then back down. The risk is in that interim period, when it pulses up to 2 to 1.

Senator **Levin**. That period would be from what day to what day, roughly? Day 15 to 30, 10 to 40?

Dr. **Kugler**. I would say 10 to 40 is a good number.

Senator **Levin**. Other than that, do you disagree with anything Dr. Epstein testified here to today?

Dr. **Kugler**. As I recall the thrust of his testimony, no. I would like to look at the details, of course. But the thrust of it is okay.

Senator **Levin**. Nothing jumps out at you?

Dr. **Kugler**. No.

Senator **Levin**. Dr. Epstein, is there any specific factual statement that Dr. Kugler made here today that you would disagree with?

Dr. **Epstein**. Well, one quibble is whether, assuming this 4 day lag in NATO's response to warning, beginning to mobilize, whether the ADE ratio actually reaches 2 to 1. I don't think it actually reaches 2 to 1. It is closer to 1.8.

Senator **Levin**. Other than that?

Dr. **Epstein**. I would want to review the details, but I don't recall in detail anything.

Senator **Levin**. Okay.

Dr. Kugler, you mentioned that ADE measurements do not count combat support assets, and that combat support can make a significant contribution to combat capability.

Who has the advantage in combat support assets?

Dr. **Kugler**. I take it you mean combat support and combat service support. There is a technical distinction between the two.

Senator **Levin**. Yes.

Dr. **Kugler**. Of course, the ADE methodology does count the artillery in combat support. That, too, is a technical issue.

Who has the basic advantage? I think in measuring this, you have to compare support to the size of the combat forces being supported, as Josh alluded to. It is the ratio of combat to support that matters.

Josh has correctly stated that, roughly, for every weapon operator, we have four people in combat support and service support while they have two. There is uncertainty on the size of the enemy forces, as naturally there would be. But, even recognizing this uncertainty, I would take that as a fair characterization.

Senator **Levin**. Does that have any effect on combat effectiveness, that difference in ratio?

The fact that we have 4 for 1 and they have 2 for 1, does that make any difference?

Dr. **Kugler**. It certainly should, and our investment strategy is based on the assumption that it does.

Senator **Levin**. Do you believe that it does?

Dr. **Kugler**. My personal appraisal, Mr. Senator, is that it entirely depends on the kind of war that is fought. If the war that gets fought is the war that we want to fight, a linear defense anchored on firepower at the inter-German border, then those assets will make an enormous difference, and will allow us to contain the attack.

However, if the kind of war that occurs is the kind that the enemy wants to fight, one of breakthrough and maneuver, and swirling meeting engagements in the rear area, where combat forces and weapons count and support does not—a quite different combat environment—then I don't think those assets will matter for much.

Senator LEVIN. Would it be your opinion, then, based just on what you said, that we have put too many eggs in that basket? There is no assurance that we are going to fight the war we want to fight. So, since there is no great likelihood, a 50/50 of that, why not change that ratio?

Dr. KUGLER. It is a very complicated issue.

In point of fact, the U.S. Army has been doing pretty well over the years in redistributing the eggs in the basket.

Our Army now has tilted fairly heavily in the direction of combat forces. The U.S. Army support structure is fairly light. In fact, we rely on 100,000 German reservists to help us out in that area.

Senator LEVIN. Do you think we should further move in that direction?

Dr. KUGLER. Not the U.S. Army per se, but I think NATO as a whole should. We tend to size our armies on the basis of logistics being a national responsibility. In order to crack that problem, we have to move in the direction of multinational logistics. If we do it, that, I think, will permit a transfer from logistics to combat.

Senator LEVIN. Let me ask both of you this next question, Dr. Epstein first.

We heard testimony in closed session last week about the Soviet assessment of the balance. My question to each of you is how do you perceive that the Soviet Government assesses the balance?

Dr. Epstein.

Dr. EPSTEIN. Well, I don't have an especially strong answer to give you.

I did write a book in 1984 on Soviet airpower, and my impression at the time—and I guess nothing has happened to change it—is that they recognize a number of vulnerabilities on their side, like inflexibility, like high dependence on ground controllers in the air, and I suspect that they do not have much confidence in their ability to operate flexibly, with decentralization and with initiative in the event such capabilities are called for.

For this reason, I suspect they would place a very high value on short wars that can be won by imposing their tactical plan on the defender, and would probably have little confidence of victory if they can be denied the kind of quick, biltzkrieg, preemptive victory that is called for in their doctrine.

Senator LEVIN. What do you think the military leaders are telling folks in the Kremlin about the balance? Just the bottom line.

You have given us your assessment of the balance and you have phrased it as best you can because you have to boil it down to full ultimate conclusions as to what the likelihood is of being able to survive or deter, or to, as you put it, produce a stalemate. What do you believe military leaders are telling the Kremlin leaders?

Dr. EPSTEIN. Forgive me. I don't mean to be contentious, but telling them about what?

Senator LEVIN. About the balance.

Dr. EPSTEIN. What are the Soviet objectives when they assess the balance?

Senator LEVIN. Knowing what you do of their objectives, if they were going to attack, according to their own doctrine as to how they would attack and how their forces are aligned, what would be the likelihood of a success of achieving a major breakthrough? You can phrase that any way you want, of reaching the French border in X number of days, whatever your understanding is of their goals.

Dr. EPSTEIN. I would be surprised if anybody whose career depended on it would tell Gorbachev that chances were better than 50/50.

Senator LEVIN. Dr. Kugler.

Dr. KUGLER. Yes, I think that is about right. I would be surprised if they would say it is better than 50/50. But, on the other hand, I think they might say that it is as high as 50/50, which is to say that it is a viable military strategy in the event that the nation's political objectives and the crisis dynamics warrant that step.

So that is a serious and very threatening appraisal from an enemy military viewpoint.

Senator LEVIN. Would you give us a numerical assessment of the chances?

Dr. KUGLER. Of a major breakthrough occurring?

Senator LEVIN. No. You just said they are probably being told it is 50/50. Would you believe from our perspective that is 50/50 or better?

Dr. KUGLER. Rolling dice is a very difficult operation, sir.

Senator LEVIN. I know. But you have not given us a numerical assessment. Try to put a numerical likelihood on it.

Dr. KUGLER. Totally as a personal guess, without viewing things in these terms analytically at all, I think John Mearsheimer has characterized it too optimistically.

I would say it is roughly 50/50.

Senator LEVIN. And his would be 30/70, is that right?

Dr. KUGLER. That is my understanding, right.

Isn't that it?

Dr. MEARSHEIMER. Yes, that is correct.

Senator LEVIN. Dr. Epstein, what about you?

Dr. EPSTEIN. I just do not think it is meaningful to attach a number like that.

Senator LEVIN. Would you say it is likely, rather than unlikely? Can you characterize it in any way.

Dr. EPSTEIN. Well, what I say is this: here are assumptions I believe to be plausible about the numbers and performance of the weapons and people and units on the opposing sides. I postulate objectives and in a timeframe of operations, and here is the simulated outcome. When I do that in a way that I think is balanced and conservative, NATO stalemates the other guy for most of the scenarios that I look at.

Senator LEVIN. So that means it would be less than 50/50 under that scenario?

Dr. EPSTEIN. I don't know what that means. But I stand by what I said.

Senator LEVIN. I presume you would say that under your assumptions, the chances of a stalemate are at least 50/50?

Dr. EPSTEIN. I really don't know that they are the same comment, are they?

Senator LEVIN. What do you mean by "stalemate?" You are the one who used the word.

Dr. EPSTEIN. I mean that the calculated ratio of forces is 1 to 1 at the end of my simulation, or better than 1 to 1 for NATO. But when people say 50/50, I really have a hard time knowing what exactly is being asserted.

Senator LEVIN. What do you believe the likelihood is of your conclusion being accurate? How confident are you? Are you very confident? Somewhat confident?

Give us some kind of assessment of likelihood. We have had various degrees of likelihood established here today.

Dr. EPSTEIN. I am giving what I believe to be the best estimate, and so I feel some confidence in asserting what I am asserting. But, from a sort of mathematical standpoint, I am not sure what it means to say that the probability is X.

In a random sample of 10,000 NATO-Pact wars, NATO wins 5,000? Is that what it means to say 50/50?

Senator LEVIN. No.

If you are giving advice to policymakers, you have to put it in the framework that they use, and we deal in likelihoods, or at least that is one of the things we deal in. We don't all deal with likelihoods, but some of us surely do. So we ask people to tell us how likely is it that a certain event will occur. That is the way we talk to each other. It is helpful if you can put your conclusions in terms of likelihood.

Dr. EPSTEIN. Well, clearly, I think the numbers that I use are good numbers to use. So, I think it is safe to say that I have better than 50/50 confidence in each of the inputs, and perhaps that translates into better than 50/50 confidence in the outputs.

I feel that you have to make implausible assumptions——

Senator LEVIN. You have to make what?

Dr. EPSTEIN [continuing]. Implausible assumptions about something in order to show, in order to derive from those assumptions, with consistency, that NATO gets blown off the continent.

So, I have confidence in these answers. But the specific numbers are somewhat harder to come by.

Senator LEVIN. Would you each identify for us the greatest deficiency, conventional deficiency, that you see in NATO.

Dr. KUGLER. Verbally, sir?

Senator LEVIN. Verbally, yes.

Dr. KUGLER. Right now?

Senator LEVIN. Yes.

Dr. KUGLER. The absence of operational reserves is the first deficiency. The second is inadequate ammunition shelters, ammunition stocks. The third deficiency is the absence of terrain enhancement. The fourth is the absence of shelters in the bases. The fifth deficiency is our need of a better FOFA capability. So I gave you five.

Senator LEVIN. I did not hear the first one and did not quite follow the first few.

Dr. KUGLER. It was ground operational reserves, Mr. Senator. Extra divisions.

Senator LEVIN. Thank you. And by terrain enhancements you mean what?

Dr. KUGLER. Preparing the terrain—not a Maginot Line, mind you.

Senator LEVIN. No one ever talks about that.

Dr. KUGLER. That's why I say "Maginot Line." What I envision is an intelligent peacetime execution of the barrier plan that the armies would plan to execute in a crisis, but would not have much time to execute if war comes quickly.

What I am talking about there is putting plastic pipeline in the ground, so that you can fill it with liquid explosives and blow them up so that you get instant antitank ditches. You stitch antitank ditches across the tank corridors in central Germany and that would really complicate things for the Soviets.

Senator LEVIN. We have been proposing that now for a couple of years. We may have some daylight in that area, we hope, before too long.

Dr. KUGLER. That would be outstanding.

Senator LEVIN. Dr. Epstein, do you want to identify a couple of deficiencies that NATO suffers in the conventional area?

Dr. EPSTEIN. Well, I would not say that the operational reserves are necessarily inadequate, but I do think that it is problematic to make sure that they can counter-concentrate in a timely way. That depends on adequate logistics and adequate command and control.

Senator LEVIN. Would you prioritize or identify what you see the top deficiencies in conventional capability that NATO faces?

Dr. EPSTEIN. Yes.

I would say that terrain enhancement is the top priority. I would also make sure that there is a follow-on to the A-10 that we produce, and at an accelerated rate.

Senator LEVIN. Thank you.

Senator Wirth.

Senator WIRTH. Can you describe or generalize about the change in Soviet conventional weaponry in the last 15 years, and if it is predominantly offensive, as some have argued, or if it is equally as usable for defensive purposes, as offensive purposes, and, therefore, that one could conclude that we should not interpret the Soviet modernization and buildup as exclusively for offensive purposes.

Dr. EPSTEIN. I think one probably wants to distinguish between offensive, from an operational point of view, and offensive with the implication of some politically malevolent offensive design, in that the intention of the attack has changed, rather than the capability to conduct offensive operations.

But, from an operational standpoint, yes, the modernization has been offensive. Certainly in the air arena, they have a deep, independent, conventional offensive tactical air capability that they simply lacked in the late 1960s. Air was primarily a defensive adjunct of the ground forces, and probably the biggest military legacy of the Brezhnev period was to give Soviet frontal aviation an independent, offensive, conventional interdiction capability.

On the ground, the introduction of self-propelled artillery has made a difference. Upgrades in the armored personnel carriers, the BMP, have made a difference, and probably the general quality of their armored forces has increased.

Whether that all confers on them high confidence of executing preemptive air operations I think is very doubtful, and we have also modernized in ways that compensate, to some extent, for their offensive modernization.

But, as to the character of the modernization, I think, by and large, it is fair to say that it has an offensive cast, yes.

Senator WIRTH. Dr. Kugler.

Dr. KUGLER. I concur entirely.

I would also say this. You have to take into account not only the modernization rate, which has been significant—Josh has absolutely correctly pointed that out—out also the size of the posture to begin with. The terrain in central Europe is such that you need 90 divisions to attack and about 50 to defend, at a minimum. Consequently, when we see the other side with 90 divisions, that posture can only square with an offensive intent. It is sized by professionals to execute an offensive strategy. They can add. They are very good at these kinds of analyses.

So they have a posture, sized consciously to execute an offensive strategy, and a force improvement program in modernization, development of command and control and the like, air improvements, which seems to square with that.

It is not only designed to support an offensive strategy, but also to support the very strategy of breakthrough and maneuver that we were talking about earlier.

Senator WIRTH. Let me carry this to the next step.

If it is true, as you are arguing, Dr. Kugler, that they have a greater advantage if you move from a classic linear strategy to a breakthrough maneuver strategy, what if you add the next level on to that, that the Soviets were to use chemical weaponry on the ground in Europe, or were to go beyond a breakthrough maneuver strategy and really focus as well on taking out our supply capabilities, moving in with deep air capability, moving in on the port structure, how would that change? Does that escalate the advantage that they have from linear to breakthrough maneuver still further?

Dr. KUGLER. It certainly could.

I would set chemical aside, because I think that is a special issue. But the notion of a deep striking air operation, designed to destroy the command and control network, degrade the air bases, shoot at the logistic supply capabilities, damage the ports, all of that would be designed—and they are doing it—to have a paralyzing impact on NATO's ability to respond in the early stages.

Chemically, if done unilaterally, without a NATO response, it might have a similar effect. But then, if you start factoring in a plausible and effective NATO response, it may simply have the effect of slowing down the war, which would work, actually, to NATO's advantage in a perverse way.

So maybe chemical attack, in the end, would not be what they should do. But our assessment does suggest that they, in fact, are moving on building an adequate chemical capability.

Senator WIRTH. Isn't the first one of those two further options very likely in the area of conventional warfare?

Dr. KUGLER. Chemical, do you mean, or the air?

Senator WIRTH. The air, using the air in that fashion?

Dr. KUGLER. Definitely they intend to do it. But there is a net aspect to all this, sir. It also depends on the programs NATO has undertaken to counteract it. If, in fact, our programs are relatively good, and many of them are, then the issue becomes much more clouded.

But there is no question, in my view, that they are moving in that direction and executing the programs to give them an offensive capability. The net impact depends on what NATO does to counteract it.

Senator WIRTH. And one of the weaknesses you cited is not our response to that?

Dr. KUGLER. We do have vulnerabilities there. I don't think our air bases are adequately sheltered, for example.

Senator WIRTH. That was not one of the top five that you listed.

Dr. KUGLER. I think I did list it. If I did not, it was an oversight. I would certainly say shelters at air bases.

Senator WIRTH. Thank you.

Dr. Epstein.

Dr. EPSTEIN. I just want to make clear, if I did not make clear before, that by agreeing or by saying that the modernization has an offensive cast, I did not mean to suggest that I think they have high confidence of success in executing these operations that they contemplate.

In fact, I have done an extended study, a book on precisely this question, and I think there are serious doubts as to their ability to actually knock out targets that they are doubtless at tempting to hold at risk. I think certainly in the air-to-air arena, NATO has a distinct edge, because of its much, much better training, more extensive training, better simulators, much more realistic training, and the experience of skillful friends, like Israel.

So I think there are really serious doubts as to whether this has been a high payoff investment for them.

Senator WIRTH. Let me then go and add the third piece of that. The first relates to a growing offensive posture, the second, that they could escalate beyond breakthrough and maneuver, and may or may not be as effective as they could be in the air; and we don't know what might happen in the chemical area. And we all pursue a strategy of negotiation on INF and then a further negotiation under the START talks.

What incentive do the Soviets have to sit down and negotiate in the conventional area?

Dr. KUGLER. Are you asking me first?

Senator WIRTH. Both of you, really.

Dr. KUGLER. Sir, I don't know what their incentive is to negotiate on the conventional forces per se. I think the negotiating strategy they might likely employ is to broaden the immediate focus beyond the center region because we would be asking for asymmetric reductions there, as we have been in the MBFR talks for many years. So they might want to include navy and air, for example, in an attempt to degrade NATO's capabilities.

At the same time, if we are ever to reach an agreement, given our negotiating strategy, they would presumably have to engage in significant asymmetrical reductions.

Who knows? They may be hoping that our political will will weaken and that for political reasons, we may come to an agreement that serves their security interests and not ours. But that has not been our policy since 1973.

Dr. **Epstein**. They may have an economic interest in that conventional forces and militaries are generally very expensive. They may also have a general political interest in appearing to be a more peace-loving partner in this relationship, just from the point of view of European audiences.

Senator **Wirth**. Well, just in closing, Mr. Chairman, it seems to me that we have two choices. One is the negotiation posture, which we want to pursue, and the other is the maintenance and attempt to match over a period of time, or attempt to increase our conventional capability over a period of time to counteract what you Dr. Kugler, suggest is a growing threat, and you Dr. Epstein, discount as a threat. We have then to figure out how to match that or how to increase our conventional capability, which is something of a political trick that I think is going to be very difficult for us to do in the United States, or with our allies, to coalesce that kind of political will to make that sort of commitment; or to figure out some way, within existing resources, to do a much more efficient job.

Is that a correct analysis?

Dr. **Epstein**. Well, I think there are ways within the given resources to do a much more efficient job than we have been doing. I honestly, sincerely believe, and have published in the 1988 Defense Budget, that the carrier-driven surface naval buildup that we are engaged in represents an enormous diversion of resources from the missions that are really critical to defending Western Europe.

So I think there are major inefficiencies in this buildup, and I can point to and specify, and do in the budget monograph, other inefficiencies in the strategic area.

So I do not think gross resources are really the problem. We do risk misallocating them.

The other thing I would like to say that bears on this is the following. I note that Senator Quayle is not here now, but I guess I am sort of responding to a question that he asked.

There is one risk of overrating this problem, which is to generate a mood of pique and annoyance that is so great that we actually shoot a working alliance in the foot. I mean, one of the risks of overrating this problem is you can really undermine a consensus for continuing to work on it.

We have outspent the Warsaw Pact every year for the last 20 years, and yet we are told that in a war, we will get blown off the continent. I think that can actually undermine consensus for continuing alone these lines. The allies should, of course, pull their weight. But I think it would be real folly to undermine a very successful alliance via an exaggerated assessment of the problem itself. I think there are dangers of overrating this threat. There are dangers of underrating it, of course, and they are obvious. But there are other dangers of overrating it.

Historically, people like to talk about Munich. One of the reasons Munich happened is that the British convinced themselves that resistance did not stand much chance of success. But, in fact, if you read the testimony of the OKW at the Nuremberg Trials, the German generals at the time believed that if Czechoslovakia had been supported, they probably would not have won.

So, you know, there are dangers, palpable dangers of overrating your adversary, and they should not be forgotten, although, on balance, they are probably not as great as the dangers of underrating him, which, of course, are paramount and important, and we therefore try to be conservative in our analyses.

Senator WIRTH. Thank you both very much for being here.

Thank you, Mr. Chairman.

Senator LEVIN. Thank you, Senator Wirth. I have just a few quick questions remaining.

Dr. Kugler, you have indicated this afternoon that you view the risk in Europe of relying on the conventional defense as unacceptably high.

Dr. KUGLER. Uncomfortably high.

Senator LEVIN. Uncomfortably high, excuse me—and that the balance is closer than is usually assumed, and that the pursuit of a viable conventional posture is do-able within revenues which are available or realistically available.

Dr. KUGLER. Yes.

Senator LEVIN. Some months ago, you wrote the following, and I am wondering if there is a change in nuance here. If so, maybe I am misreading it. You wrote that our allies see no major need for the difficult, costly efforts required to field a conventional posture capable of defense in its own right.

Is there any difference in that, or am I reading something in there that I should not?

Dr. KUGLER. My suspicion is that you are selectively quoting from a document. There are other things said in there, and there is a bit of a misperception that arises just out of that one particular statement.

But there is no question that the allies have been rather reluctant to do more, and that we have had to lead the alliance. I think we do have to continue leading the alliance.

NATO will not achieve that goal without decisive U.S. leadership, it will be achieved in the context of the allies following, if the traditional pattern holds forth, rather reluctantly.

On the other hand, my personal experience—and I have had personal experience in the H&S negotiations, in the air defense negotiations, and many others—is that when we do lead and come up with good, do-able ideas, the allies follow and react to our leadership to a surprisingly high degree.

Senator LEVIN. My other question is for both of you.

How has the bottom line balance shifted over time, over the last 10 years? Are we "better off coventionally" now than we were 10 years ago, say? Are we about the same? Are we worse off?

Dr. KUGLER. I can take a crack at that. I follow the technicalities of this in our scoring system.

In the 1970s, there is no question but that the balance deteriorated, and rather steadily. The Soviets were improving like 5 percent a year in ADE scores and we were going up at about 3 percent. These are crude numbers.

You can see that, while that difference would not matter much after 1 year, it would grow after several years and eventually have a big, cumulative impact.

Senator **Levin**. I'm not talking about ADE scores. I am talking about the overall——

Dr. **Kugler**. I think this appraisal applies to the qualitative assessments as well.

However, I think, starting about in 1980 or 1981, as some of the allied programs began to come in and as our own ground modernization effort with the M-1 tank and the like started to pick up, my personal perception is that we begin to stay about equal to them. I realize that this judgment, in fact, is controversial. Some in the Defense Department would tell you that we have deteriorated somewhat. I think there is a range of uncertainty here.

Senator **Levin**. I think General Rogers was quoted today as saying that we deteriorated during this time.

Dr. **Kugler**. Right, and I have talked to him personally about this. I stand by my statement and I am sure he stands by his.

Senator **Levin**. You don't agree with his assessment.

Dr. Epstein.

Dr. **Epstein**. Better. It's better.

Senator **Levin**. It's better now than 10 years ago?

Dr. **Epstein**. Yes.

Senator **Levin**. Gentlemen, we thank you and our other witnesses. We also would alert you that we will have additional questions for you, which we hope you might be able to take the time to answer. If not, in any event, we appreciate your testimony today. If you would like to supplement your testimony, feel free to do so and to comment on any question or comment today. We would be happy to have that.

Questions Submitted by Senator Dan Quayle

Senator **Quayle**. These questions are for all four witnesses.

Does DOD use any method other than translating divisions into armored division equivalents, or ADEs, to assess the balance in Europe? What are the inadequacies of using ADEs as a unit of measure?

Dr. **Mearsheimer**. The Defense Department has relied for some time on ADEs to assess the balance in Europe. I have been told that the Pentagon has been experimenting with a new measure, the Division Equivalent Firepower (DEF), about which there is little information in the public record. Again, I have been told that the raw balance of forces changes little when you move from ADEs to DEFs, which is hardly surprising. There is no perfect unit of measure for assessing the balance in Europe, although I believe the ADE serves that purpose well. Its major deficiency is that it does not take into account such important functions as command and control, training, logistics, and maintenance. Since NATO spends considerably more money on these functions than does the Pact, the ADE measure is probably biased somewhat against NATO.

Senator **Quayle**. How important is consideration of the air balance in assessing likely war outcomes in Europe?

What would be the effect on the ground war if NATO lost its superiority in the air?

Dr. **Meirsheimer**. NATO has a marked advantage over the Pact in terms of close air support aircraft, which I believe will help NATO stymie a Soviet land offensive. There is little doubt that NATO will do very well in the air-to-air battle. However, a Pact victory in the air war would have very detrimental consequences for NATO's efforts in the ground war.

Senator Quayle. How does the assessment of likely war outcomes vary according to mobilization assumptions, for example, attack with in-place forces, or with NATO lagging by one week?

Dr. Meirsheimer. Assessments of likely war outcomes vary greatly according to mobilization schedules, NATO's in-place forces can stand up to the Pact's in-place forces, and NATO has access to reinforcements that can offset the movement of Soviet second echelon forces to the Central Front. However, NATO must mobilize shortly after the Pact does if it hopes to maintain a favorable balance. Ideally, NATO should mobilize its own forces immediately after the Pact does, but certainly should not wait more than four days to do so. Once the lag time reaches seven days, NATO begins to face serious problems.

Senator Quayle. NATO has long said that it does not have to counter Soviet tanks one-for-one because it can destroy tanks with antitank weapons. Some now argue that Soviet reactive armor makes most NATO antitank guided weapons useless. Do you agree?

If it is true, that is the impact on the balance assessment?

Dr. Meirsheimer. It is very difficult from the public record to make much sense of the debate about reactive armor. It is not clear just how effective that armor is in the face of NATO's evolving ATGM force. It is also not clear to me how extensively the Soviets have deployed reactive armor and what impact it will have on their force structure in the years ahead. It seems to be the case, however, that in that dynamic arms race between tanks and ATGMs—especially shoulder-launched ATGMs—reactive armor represents an advantage for the tank. If that is so, I think it works to NATO's detriment, although it would hardly be a catastrophic development.

Senator Quayle. General Rogers has said: "I have watched the gap between NATO and Pact capabilities continue to widen in the areas we can measure. The gap is going to get beyond restoration."

Do you agree?

Which elements of the negative hand are most important?

Dr. Meirsheimer. I have been carefully studying the conventional balance for about ten years and during that time I have seen no evidence of a widening gap between NATO and Pact capabilities. In fact, I am struck by how little the balance in Europe changes over time. I know of no serious analysis in the public record that documents an adverse shift in the balance over the past decade or so. It would be very helpful if General Rogers would provide some serious analysis to support his claims.

Senator Quayle. Does DOD use any method other than translating divisions into armored division equivalents, or ADEs, to assess the balance in Europe? What are the inadequacies of using ADEs as a unit of measure?

Dr. Cohen. DOD uses several different measures for military power: a full description of them can be obtained from either the Office of Program Analysis and Evaluation or from the Office of Net Assessment, both in the Office of the Secretary of Defense. All of these indicators can, when applied carefully and consistently (something which is not always done) give analysts a sense of long term trends. They *cannot*, however, predict the outcome of battle. The outcome of battle and indeed of war depends on a whole host of factors including the nature of terrain, the skill and organization of troops, their recent experiences, and indeed, sheer luck—none of which can be quantified. The danger in using such a measure is precisely the one illustrated by Professor Mearsheimer's testimony, that is, the intellectual's fallacy of believing that a single seemingly neat measure can capture the vast complexities of warfare.

Senator Quayle. How important is consideration of the air balance in assessing likely war outcomes in Europe?

What would be the effect on the ground war if NATO lost its superiority in the air?

Dr. Cohen. The air balance is extremely important in assessing likely war outcomes in Europe chiefly because NATO would have virtually no hope of holding if it lost air superiority not only over its own territory but, in some measure, over eastern Europe as well. The air balance cannot be properly assessed unless one cranks into the analysis a Soviet surprise attack, and the many different means that it would use including special operations forces, surface to surface missiles, and possibly, chemical weapons. I do not know of an unclassified study which has done this properly.

Senator Quayle. How does the assessment of likely war outcomes vary according to mobilization assumptions, for example, attack with in-place forces, or with NATO lagging by one week?

Dr. **Cohen**. Even the optimists concede that mobilization assumptions undermine their analysis. In the case of Professor Mearsheimer's analysis, a wildly unrealistic assumption—that NATO would mobilize at the same time as the Warsaw Pact—completely vitiates his arguments. Even more traditional kinds of analyses which look to a NATO mobilization one week after the Warsaw Pact does not capture the full complexity of the problem. As I argued in my testimony, NATO would mobilize in a *fragmented* and *dilatory* fashion. There would not, in other words, be a late but uniform mobilization. It is conceivable that even if the United States mobilized early and fully that NATO would have grave weaknesses because other countries had not chosen to do so.

Senator **Quayle**. NATO has long said that it does not have to counter Soviet tanks one-for-one because it can destroy tanks with antitank weapons. Some now argue that Soviet reactive armor makes most NATO antitank guided weapons useless. Do you agree?

If it is true, what is the impact on the balance assessment?

Dr. **Cohen**. One of the most astonishing aspects of Professor Mearsheimer's oral testimony was his declaration that he stood by all of his 1982 article, which makes the case that one reason to be confident on NATO's ability to hold a Soviet attack is NATO's superiority in anti-tank guided missiles. Of course, as any close reader of the technical press knows, the widespread introduction of reactive armor on Soviet tanks sharply diminishes the effectiveness of NATO anti-tank weapons. Although no single weapon is decisive in assessing the overall balance this sudden diminution of the effectiveness of one of our critical weapons is most alarming.

Senator **Quayle**. General Rogers has said: "I have watched the gap between NATO and Pact capabilities continue to widen in the areas we can measure. The gap is going to get beyond restoration."

Do you agree?

Which elements of the negative hand are most important?

Dr. **Cohen**. I most certainly agree with General Rogers assessment. What is most alarming is the improvement in Pact capabilities across the board and in key areas such as tanks, self-propelled artillery, and helicopters. Thus, no single measure, no single new weapon system, can hope to counteract the Warsaw Pact buildup. What is required rather is a comparable buildup by NATO—something which is by no means infeasible in view of the vastly superior economic resources of NATO. I am particularly concerned about the virtual chemical disarmament of NATO, and about the development of Soviet capabilities to strike very deep into NATO rear areas with special operations forces and with very accurate surface to surface missiles.

Senator **Quayle**. Does DOD use any method other than translating divisions into armored divisions equivalents, or ADEs, to assess the balance in Europe? What are the inadequacies of using ADEs as a unit of measure?

Answer. DOD uses several other static and dynamic techniques that, along with professional military judgment, are combined together to form an overall appraisal. One example is computer war gaming, which simulates a war from start to finish. The ADE method simply provides one static, quantative tool for comparing weapon systems on both sides. It does not take into account support assets or airpower. Nor does it permit analysis of battlefield dynamics that take place after the onset of fighting.

Senator **Quayle**. How important is consideration of the air balance in assessing likely war outcomes in Europe?

What would be the effect on the ground war if NATO lost its superiority in the air?

Answer. The air balance is critically important to assessing the outcome. The loss of air superiority would have a major degrading effect on NATO's performance. It would leave NATO's ground forces exposed to enemy air attack, while reducing the ability of NATO's air forces to contribute to the ground battle.

Senator **Quayle**. How does the assessment of likely war outcomes vary according to mobilization assumptions, for example, attack with in-place forces, or with NATO lagging by one week?

Answer. The assessment of likely war outcomes is sensitive to assumptions made about relative buildup rates and the timing of an enemy attack. The DOD scenario, which postulates an enemy attack after a short period of intense mobilization efforts in which NATO lags behind by a few days, is based on prudently conservative, realistic assumptions. More optimistic assumptions would yield more sensitive results.

Senator **Quayle**. NATO has long said that it does not have to counter Soviet tanks one-for-one because it can destroy tanks with antitank weapons. Some now argue that Soviet reactive armor makes most NATO antitank guided weapons useless. Do you agree?

If it is true, what is the impact on the balance assessment?

Answer. This question could be answered definitively only through a highly technical analysis that addresses the penetrativity of NATO's weapons against enemy reactive armor. In general, Soviet acquisition of reactive armor represents one more stage in a long, competitive evolution of armor and anti-armor weapons. This step doubtless will make Soviet armor more difficult to penetrate, but it is unlikely to render NATO antitank weapons "useless". Moreover, NATO's weapons, in turn, are undergoing important improvements that will help compensate for this change.

Senator QUAYLE. General Rogers has said: "I have watched the gap between NATO and Pact capabilities continue to widen in the areas we can measure. The gap is going to get beyond restoration."

Do you agree?

Which elements of the negative hand are not important?

Answer. The gap plausibly could deteriorate beyond restoration if NATO does not act vigorously to make required improvements in its own forces. By finding improvement measures contained in its Force Goals, however, NATO would be able to offset expected Soviet improvements while otherwise shoring up its own posture.

As I indicated to Senator Levin, NATO's greatest deficiencies include lack of adequate operational reserves, ammunition stockpiles, preparation of the terrain, hardened airbases and aircraft shelters, and deep strike systems.

Senator LEVIN. Gentlemen, we are grateful for your presence.

[Whereupon, at 4:40 p.m., the subcommittee hearing was concluded.]

ALLIANCE AND DEFENSE CAPABILITIES IN EUROPE

TUESDAY, NOVEMBER 3, 1987

U.S. SENATE,
SUBCOMMITTEE ON CONVENTIONAL FORCES
AND ALLIANCE DEFENSE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

CONVENTIONAL ARMS CONTROL IN EUROPE

The subcommittee met, pursuant to notice, at 9:37 a.m., in room SR-222, Dirksen Senate Office Building, Senator Carl Levin (chairman) presiding.

Present: Senators Levin, Nunn, Dixon, Wirth, Shelby, Warner, and Quayle.

Staff present: Arnold L. Punaro, staff director; Romie L. Brownlee, deputy staff director; Richard D. Finn, Jr., Judith A. Freedman, John J. Hamre, and Michael J. McCord, professional staff members; Richelle M. Turner, staff assistant.

Also present: Gregory J. Weaver, assistant to Senator Levin; William J. Lynn, assistant to Senator Kennedy; Charles C. Smith, assistant to Senator Dixon; Donald A. Mitchell, assistant to Senator Glenn; Robert K. Griffith, assistant to Senator Wirth; Terrence Lynch, assistant to Senator Shelby; William J. Wight, assistant to Senator Warner; Henry D. Sokolski, assistant to Senator Quayle; Mark J. Albrecht, assistant to Senator Wilson; Alan Ptak, assistant to Senator Gramm; Steven Andreasen, assistant to Senator Gore; and Rick Sylvester, assistant to Senator Levin.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Senator LEVIN. Good morning, everybody. The Conventional Forces and Alliance Defense Subcommittee meets this morning to take testimony on the subject of conventional arms control in Europe.

This hearing continues a series of hearings that the subcommittee has been conducting this summer and fall on NATO's conventional defense. Three of the previous hearings that the subcommittee held were devoted to assessing the military balance in Europe.

Although those hearings did not yield a consensus on the state of the balance between NATO and Warsaw Pact forces, they helped prepare the subcommittee to address today's subject and other future topics of hearings.

Several factors are converging to refocus attention on status and prospects of conventional arms control in Europe.

The impending INF Treaty, the Soviet Union's expansive but vague conventional arms control proposals, pressures on NATO members' defense budgets, and American concerns over burden sharing have combined to enhance the prominence of this aspect of arms control, and has its potential of being at least one way of addressing some of the conventional imbalances that exist in Europe.

To help us explore this important issue, the subcommittee has invited three experts to testify today. Our first witness will be Mr. Charles Thomas, who is the Principal Deputy Assistant Secretary of State for European and Canadian Affairs.

After Mr. Thomas completes his testimony, we will hear from a panel of two witnesses. Ambassador Jonathan Dean, who is the former U.S. Representative to the MBFR talks, and Phillip Karber, a defense analyst and specialist at the BDM Corp.

Gentlemen, I appreciate all of you taking the time to appear before our Conventional Forces Subcommittee today. I know that Senator Quayle and some other members are trying to get here, and will probably have statements for the record. Senator Dixon's statement will be inserted at this point.

[The prepared statement of Senator Dixon follows:]

PREPARED STATEMENT BY SENATOR ALAN J. DIXON

Mr. Chairman, today's hearing will focus on conventional arms control and the alliance's strategy in working with the Soviet Union and the other Warsaw Pact countries.

Mr. Chairman, I have reviewed the witnesses's statements and I am concerned whether or not this administration seriously considers the challenges we and our allies face in seeking a conventional arms control agreement.

I believe that now is the time for this administration to begin serious talks in coordination with our allies in Europe with the Soviet Union for a reduction in conventional forces.

Thank you, Mr. Chairman.

Senator LEVIN. We will now call on our first witness, Charles Thomas. We welcome you, we are grateful for your appearing here today, and we look forward to your testimony.

STATEMENT OF CHARLES H. THOMAS, PRINCIPAL DEPUTY ASSISTANT SECRETARY OF STATE FOR EUROPEAN AND CANADIAN AFFAIRS

Mr. THOMAS. Thank you Senator. It is a pleasure to be here this morning to speak with you about a subject that rightly will command more of our attention in the coming months and years. That is, of course, conventional arms control in Europe.

I hope this is one of the many formal and informal contacts we will have as we move forward into a new era for an old topic.

Western interest in redressing the conventional imbalance dates back to the aftermath of World War II, when the West rapidly demobilized, and the Red Army dominated Eastern Europe.

In fact, the establishment of NATO itself was largely motivated by the existence of Eastern conventional superiority. Our efforts to offset the imbalance through force improvements continue today.

We have long viewed conventional arms control as another complementary means of achieving a more stable balance. Formal negotiations with the East began as the result of a NATO initiative over 14 years ago in Vienna at the Mutual and Balanced Force Reduction talks.

While no accord has been achieved in Vienna, MBFR has produced a useful exchange of views and progress has been registered in some areas.

For example, NATO and Warsaw Pact countries have agreed in principle that the two alliances should reduce to equal levels of military manpower in Central Europe. Both sides have also proposed a range of associated measures, including verification through on-site inspection and manned checkpoints.

I will not attempt a full analysis of why we have not been able to reach agreement in MBFR. Suffice it to say that fundamental differences regarding data and verification remain.

Moreover, the parties have not found a way to structure a mutually acceptable agreement covering the limited territory of Central Europe. Despite the longstanding deadlock in MBFR, the United States and its allies remain firmly committed to achieving an equitable, verifiable agreement there.

We continue to press the East to respond constructively to our major compromise proposal of December 1985. Meanwhile, the possibility of nuclear reductions, including an INF agreement, has begun to focus renewed attention on the conventional imbalance in Europe, still heavily in favor of the Warsaw Pact.

East and West have responded with new initiatives in conventional arms control. In May 1986, NATO foreign ministers meeting in Halifax called for strengthening security and stability in the whole of Europe through lower levels of conventional forces.

The next month, the Warsaw Pact issued its Budapest appeal, which also called for conventional force cuts from the Atlantic to the Urals. The idea of moving to a larger European arms control zone, which would include the western portion of the U.S.S.R., was originally a Western concept.

The Soviet offer, first broached in April 1986, to negotiate force cuts from the Atlantic to the Urals, represents an opportunity to be seized. Following up on the Halifax statement, NATO established the high-level task force on conventional arms control.

The purpose of this task force was to conduct a review of policy in this area and point the way ahead. The concrete results of the HLTF's work can be seen in two alliance negotiating proposals tabled this past summer in Vienna.

The first is NATO's military security proposal, tabled July 10 in the Vienna CSCE follow-up meeting. It calls for the establishment of two distinct conventional security negotiations to take place within the framework of the CSCE process. These conferences would commence as soon as possible, perhaps as early as next year.

One negotiation, among all 35 CSCE participating states, would continue the work of the Stockholm Conference on security and confidence-building measures.

The other, an autonomous negotiation including the 16 members of NATO and the 7 Warsaw Pact countries, would seek to eliminate the conventional imbalance by removing destabilizing military disparities and the capability for surprise attack and large-scale offensive operations.

The second major product of the HLTF, which continues to steer NATO's conventional arms control policy, is a draft negotiating mandate for the second of the negotiations, which I have just mentioned. This would be a conference on force levels, which we are calling the stability talks, among the 23 alliance members. NATO countries tabled this draft mandate on July 27, this year, in an informal East-West discussion, which is also taking place in Vienna.

The mandate offers to negotiate all conventional forces based on land from the Atlantic to the Urals. Naval, chemical, and nuclear weapons would be excluded.

At the most general level, Warsaw Pact countries have received positively NATO's overall conventional arms control approach, as embodied in our CSCE military security proposal. They are publicly committed to further CSBM work among the 35, and to force reductions in the Atlantic to the Urals area.

Movement toward a balanced CSCE final document, however, depends on Soviet willingness to demonstrate significantly improved implementation of the human rights and fundamental freedoms provisions of the Helsinki final act. Such progress is necessary to maintain the essential balance of the CSCE process.

Stability mandate discussions have generally been positive and business-like. The Soviets show a clear desire to move ahead promptly toward the establishment of a new conventional stability negotiation.

There are serious problems, however, beginning with the Soviet refusal to admit their overall conventional superiority. Gorbachev has spoken only of disparities in certain categories of forces.

Moreover, the Budapest appeal calls for equal NATO-Warsaw Pact reductions, which would leave NATO in a weaker position.

The Soviets also want to mix tactical nuclear systems into these conventional talks. They hope in this way to pursue their objective of denuclearizing Europe through the backdoor, as it were.

We believe our priorities in a post-INF environment should be to reduce strategic nuclear, as well as chemical and conventional weapons, before tackling short-range nuclear systems.

Finally, the East would subordinate the stability talks to the CSCE process and include the neutral and nonaligned nations as direct participants.

We firmly believe NATO-Warsaw Pact force levels should not be subject to the timetable of a 35-nation conference, which also treats human rights and economic issues, and includes states whose forces would not be affected by the reductions negotiated.

In NATO and in our own inter-agency process, we are considering the substantive approach to take in the negotiations ahead.

There are wide areas of consensus. On additional CSBMs, we are developing new proposals that build on and expand the results of the Stockholm Conference, emphasizing increased openness of military activities.

On the political side, an agreement or an approach must perform an educative function by demonstrating existing imbalances.

It must therefore be understandable and supportable by Western publics. On the military side, it must of course improve NATO security. It must also not encumber critical force modernization programs.

It must compensate for geographic and numerical asymmetries. It must be shaped by the goal of achieving a stable balance, not simply in the quantity or capabilities of military forces, but also in the ability to generate forces and bring them to bear quickly.

It should, as a matter of priority, focus on ground forces, that is to say those forces most essential to an invasion objective, namely the ability to seize and hold territory.

It must not be simply a reductions proposal. Stability may be approached through a variety of means, including limitations, redeployments, and related measures, as well as reductions.

And finally, it must of course, be verifiable, with an adequate exchange of information. Within these parameters, we have considered such things as equal percentage reductions of units, and/or equal ceilings on key items of offensively-oriented equipment.

For example, it could be tanks and artillery, as well as manpower in the entire zone, and/or in the subzones. We have also looked into measures short of reductions that would improve stability in their own right.

For example, in addition to a verification regime of information exchange and on-site inspection, we are considering the establishment of fixed and mobile observation teams, perhaps supplemented by automatic sensing devices to detect unusual military activity.

In the weeks and months ahead, we will be working in Vienna toward an agreed stability mandate and a balanced CSCE final document.

Depending on Soviet human rights performance and the resolution of the mandate issues mentioned above, we are hopeful this could be achieved by the end of this year or early 1988.

If so, the distinct negotiations on CSBMs and stability could begin in the spring or summer of 1988. Meanwhile, the administration will continue its internal deliberations and intra-alliance consultations on a package of proposals for each forum, with a view of tabling these NATO agreed proposals when the conferences convene.

As for the fate of MBFR, we must wait and see if indeed a stability mandate is agreed, and a stability negotiation is launched that makes MBFR redundant. We cannot prejudge these issues now.

Meanwhile, we remain committed to our December 1985 proposal, to which the East has yet to respond in any constructive way. Thank you.

Senator LEVIN. Thank you very much. Before I lead off with some questions, I wonder if either of my colleagues have an opening statement.

Senator Wirth, do you have an opening statement?

Senator WIRTH. No, I do not, Mr. Chairman. I just want to welcome the Secretary.

Senator LEVIN. Mr. Thomas, on the final page of your prepared statement, you noted that we are working toward an agreed mandate to negotiate on conventional arms control, and an agreed CSCE final document.

You also noted that both could be resolved by the end of the year or early 1988, depending on Soviet human rights performance, and the resolution of the mandate issues.

If the mandate issues are resolved, and conventional arms control negotiations begin as planned under the umbrella of the CSCE, is there any intention on the part of the United States or our NATO allies to link progress in conventional arms control to Soviet improvement in the human rights area?

Mr. THOMAS. No, sir. After we have finished the mandate work, which is taking place simultaneously with the ending of the CSCE review conference, the stability negotiations would then take on a life of their own and would operate autonomously, and they would not be linked directly to CSCE.

They would be, as we have described it, within the framework of the CSCE process, but they would not be subject to CSCE deadlines, procedures, or a significant reporting requirement.

Senator LEVIN. My question is a little broader than that. Not only whether they are linked to CSCE deadlines or requirements, but whether or not they will be linked to improvements in Soviet human rights behavior.

Mr. THOMAS. No, sir. I mean, any arms control negotiation, to some extent, as the Secretary has said, operates in the general context of what is happening within the Soviet Union. And their human rights activity affects our confidence in their commitments.

But this negotiation would not have the kind of linkage that a negotiation on CSBMs, which is embedded in the CSCE process and institutionally linked to it, has.

Senator LEVIN. Also on page 4 of your prepared testimony, you noted that one purpose of NATO's position in the conventional arms control talks is to perform an educative function by demonstrating existing imbalances.

Are you talking solely about numerical imbalances in men or equipment? And will our position serve to illustrate imbalances in training or technology, some of which might favor us?

Mr. THOMAS. Well, we are prepared to look at the whole spectrum of the military balance in Europe. There are things that are relatively easy to measure quantitatively, and there are things that are very difficult to measure.

Training is not easy to measure. Quality of troops is not easy to measure. I think all of us would agree that American troops in Europe and the German army are probably a good bit superior to the quality of the Soviet and NSWP troops. But that is something that you cannot really quantify.

So we have to deal with the capabilities that we can measure, and that will be our primary focus.

Senator LEVIN. The average length of service, for instance, of the Soviet soldier can be quantified and compared to the average length of experience and service of American personnel. So that could be quantified.

Mr. THOMAS. Sure.

Senator LEVIN. Will that be taken into consideration?

Mr. THOMAS. Well, I think we will try to take everything into consideration. But the focus will be on the readily quantifiable things.

Senator LEVIN. On the readily, numerically quantifiable things. So that if we have advantages in quality of equipment, for instance, that is not something that we want to educate the American or Western public about. Just the numerical quantity issues.

Mr. THOMAS. Well, it is very difficult to get a handle on the quality of equipment question as well. I mean, that is not always self-evident.

Senator LEVIN. Are those important factors?

Mr. THOMAS. We are prepared to, you know, consider the whole panorama.

Senator LEVIN. Are they important factors, quality of equipment, for instance? Training of personnel? Flying hours? Logistic support?

Are those kind of things relevant in terms of outcomes of any kind?

Mr. THOMAS. Absolutely.

Senator LEVIN. But they are difficult to quantify?

Mr. THOMAS. Yes, sir.

Senator LEVIN. Do you think that there ought to be some effort made to include those in any description of the conventional balance? Or should we just limit that description to the bean count?

Mr. THOMAS. Well, I think we are tending to limit it in a bean count direction, simply because it is hard to get a handle on some of these other factors.

Senator LEVIN. But my question is, if they are relevant factors, for instance if the quality of equipment and the amount of training, are relevant to the outcome of any contest, should we not make some effort at least to discuss that in any description of the balance?

Mr. THOMAS. Well, it would be hard to do. I think we are looking at this through the optic of the military commander.

He may have considerable information on the quality of the other side's equipment. He may have considerable information on the quality of the training. These are areas which are hard to test unless you get into the heat of battle.

I think that a military commander is going to be looking more at the quantifiable capabilities of the other side as he configures his own forces.

Senator LEVIN. How about the readiness levels of the troops? Is that a relevant factor?

Mr. THOMAS. It is relevant. Yes, sir.

Senator LEVIN. Do you think a military commander looks at that?

Mr. THOMAS. He certainly does. We are looking at that, because we are looking at the relative readiness of divisions of the Soviet Union in Germany, as against, say, divisions that are back in the Urals area.

Senator LEVIN. And are we quantifying that in our bean count?

Mr. THOMAS. It can be quantified to some degree. We have some ideas as to what their manning levels are and how long it takes to bring them up to full strength.

Senator LEVIN. On page 3, Mr. Secretary you noted that we believe our priorities in a post-INF environment should be to reduce strategic nuclear as well as chemical and conventional weapons before tackling short-range nuclear systems. And I am focusing on the word "before" there.

By "we" in your statement, do you mean NATO or the United States, in that case?

Mr. THOMAS. This statement grows out of the paragraph eight of the Reykjavik communique, NATO Reykjavik communique.

Senator LEVIN. So you are including all of our NATO allies?

Mr. THOMAS. Yes, sir.

Senator LEVIN. And you are including the French?

Mr. THOMAS. Most definitely, the French.

Senator LEVIN. Would the elimination of chemical weapons improve NATO's prospects for conventional defense of Europe?

Mr. THOMAS. It would indeed, if it could be accomplished.

There is a very significant disparity in terms of chemical weapon offensive capability on the part of the Warsaw Pact compared to NATO, and also in terms of equipment and training for troop protection.

Senator LEVIN. Are the two talks linked in any way, the chemical talks and the conventional talks?

Mr. THOMAS. No, sir. They are not.

Senator LEVIN. But they are linked time-wise in our view, so that we have to succeed on one before we would agree to the other?

Mr. THOMAS. We think that there is not a linkage between conventional and chemical talks. Those are two types of approaches that we think can run in parallel.

We are only talking in Reykjavik about the question of nuclear systems under 500 kilometers.

Senator LEVIN. I am talking about the chemical talks and the conventional talks.

Mr. THOMAS. Yes.

Senator LEVIN. Would we be willing to enter into a conventional agreement which we otherwise thought was beneficial for us, prior to entering into an agreement on chemicals?

Mr. THOMAS. Yes, sir.

Senator LEVIN. You noted also in your prepared statement that NATO's conventional arms control position should not or must not, as you phrase it, encumber critical force modernization programs. Could you give us a couple of examples of those programs?

But more significantly, would you then tell us whether or not you are saying that we are going into these negotiations with certain NATO conventional programs off-limits, in terms of constraints or reductions?

Mr. THOMAS. The Soviets have from time to time attempted to impose qualitative limits. They particularly would like to get at aircraft, for example, in which they think that we have a superiority.

There are kinds of new equipment, or the evolutionary process of modernization in Europe, which would not want to freeze in any kind of agreement.

Senator LEVIN. But are there any areas that are off-limits in these conventional talks? Any conventional areas?

I know we have taken a position on the short-range nuclear, but we are talking about conventional systems which we are saying are off-limits entering these talks?

Mr. THOMAS. No, sir.

Senator LEVIN. When you say that our position must not encumber certain critical force modernization programs, then you are not implying that those programs would be off-limits to any discussions?

Mr. THOMAS. No, we are not. We are not putting anything off-limits to discussion.

There may be limits on the totals on certain systems, without getting at limits on, say, qualitative elements or improvements. Yes.

Senator LEVIN. Thank you, Mr. Secretary. Senator Nunn.

Senator NUNN. Thank you, Senator Levin. Senator Levin, I want to thank you for having these hearings because this subcommittee has undertaken a comprehensive set of hearings on what I think is the most important area in terms of deficiency that we have in NATO in our overall security.

It is a strange thing that we are always negotiating on nuclear weapons, and yet our biggest problem is in the conventional arena.

And anyone that came down from outer space and asked what NATO's top priority should be in arms control negotiations, I think, would readily say that conventional balance to Soviet tank armies, and yet we do not even have a proposal tabled even now with the procedural progress that has been made.

We do not even have a proposal that, even if accepted, and even if totally verifiable, and even if totally carried out, would make an appreciable difference in the strategic and conventional balance in Europe. Strategic being in the broadest sense and not being nuclear.

So I think these hearings are very important, and I do believe that, as Mr. Thomas has pointed out here today, that we have made some procedural progress in NATO recently. And I congratulate the administration and the NATO allies for making that procedural progress.

We have not made much substantive progress. I know that there are a lot of discussions going on. But looking at it from a broad perspective, I think NATO has been very delinquent in not, over the last several years, having clear and definitive goals and objectives in conventional arms control.

We have been negotiating INF for 6 years. And it seems to me at some point it would have occurred to NATO that we ought to be thinking in terms of what our goals and objectives are in the conventional area.

I also believe, I note you say here that MBFR, I guess the status of it you are going to keep the mutual balanced force reduction talks going until you know that something is going to take their place.

I view it a little bit differently. I think that MBFR has some danger to us now that did not exist before the likelihood of an INF agreement. The MBFR negotiations focus almost exclusively on manpower.

Manpower is so easily reintroduced. Even if you succeeded in removing 30,000 or even 50,000 Soviet forces, and even if it was a disproportionate reduction, they can fly or move those back in there very quickly.

There is some danger to continuing an MBFR negotiation. Because if the Soviets accepted completely our own proposals and solved all the data problems and did everything we wanted tomorrow morning on MBFR, I think we would be worse off, not better off, because the public in this country and Europe would naturally conclude that we certainly would not have tabled a proposal and been talking about it for 14 years unless it had something in it that was going to help our strategic overall stability in terms of conventional forces.

And yet MBFR, even if our own proposal were accepted and even if it were totally verifiable and carried out within a reasonable timeframe, would not make any appreciable difference in the balance of power.

Could I ask you just to comment on that last statement? I will not try to walk you through all the substantive, but do you believe, Mr. Thomas, that we would have any significant change in the conventional balance in Europe now if the Soviets, the Warsaw Pact, completely agreed with everything we have asked for at MBFR?

Mr. THOMAS. I think that we would have a marginal plus coming out of the acceptance by the Soviets of the current proposal.

Senator NUNN. Very marginal. Would it not be?

Mr. THOMAS. It would be very marginal. Yes, sir. It would be primarily in the area of the acceptance of the associated measures and verification provisions.

It would give us a degree of transparency that we have never had before.

Senator NUNN. Of course, you could keep the associated measures and the confidence-building measures and get that good part of MBFR out, and yet terminate the discussions about manpower removal, which I believe you would agree are virtually meaningless. Are they not?

Mr. THOMAS. Yes, I would agree. On the other hand, MBFR serves a very important political function in Europe.

If we propose to terminate MBFR before we have replaced it with another negotiation, I think we would run into real difficulty with the allies. We would create political problems internally for some of the countries which feel that they have to have some sort of ongoing conventional arms control negotiation.

Senator NUNN. I would suggest to the administration that consideration be given to terminating those parts of MBFR which would be essentially meaningless, even if agreed on, so that we do not deceive ourselves and our own public, and most notably I mean the manpower portions thereof.

And I also would suggest that a time certain be set that that termination would be effective, and that that time certain also be the time by which NATO at least sets as a goal for itself a substantive proposal that we could make to the Soviet Union and Warsaw Pact on conventional.

I just think it is very important in the post-INF period, as opposed to before that, that we not have proposals floating around which do not have any meaning or any substance. And even if agreed on, would not make much difference.

I think that we have found that Gorbachev is capable of calling our bluff when we do have something that is a bluff, and raising the ante. And I would hope that we would take that into consideration.

I want to ask a couple of questions. You mentioned on page 3, Secretary Thomas, paragraph one, full paragraph, "The mandate offers to negotiate all conventional forces based on land from the Atlantic to the Urals, naval, chemical, and nuclear weapons would be excluded."

How do you view air power in that? Because air forces are based on land when they are not flying. Are they included in this? Or are they excluded?

Mr. THOMAS. We have deliberately not addressed the question of air power in the mandate because it remains an open question. It has not been resolved within the alliance.

Senator NUNN. So that is vague on purpose.

Mr. THOMAS. Yes, sir.

Senator NUNN. It could be included within this definition.

Mr. THOMAS. It could.

Senator NUNN. Or it could be excluded.

Mr. THOMAS. Yes, sir.

Senator NUNN. When do you plan to decide that? What is the state of play on that?

Mr. THOMAS. We are meeting in NATO rather intensively on the question of coming up with a negotiating proposal.

There is another HLTF meeting this month. And there is a lot of discussion at the deputy level. Our effort is to get a proposal that, at least in terms of the grand outline, we could place on the table very quickly, even before the negotiations begin.

Certainly when the negotiations begin we want to have a proposal that we can lay on the table from the first day. So we will have to resolve some of these questions.

Senator NUNN. What timeframe are we talking about here?

Mr. THOMAS. Well, the mandate effort is tied to the CSCE schedule until it gets decided and then goes off on its own.

The CSCE situation right now is that our expectation that it would end at the end of this year looks rather unlikely. So it will probably be in the first quarter of 1988 that there would be a final document coming out of the CSCE conference.

At that point, we would be prepared, I think, to move quite swiftly into a negotiation, which should start, I would think, in the second quarter of next year.

Senator NUNN. How is our own Government structured in trying to work up our Government's position on these issues, the substantive part of these issues?

Do we have a task force? And if so, who heads that task force? And who is on it?

Mr. THOMAS. Yes, sir. We have what is called a conventional forces inter-agency group. And it is headed by Allen Holmes, director of the Bureau of Political-Military Affairs in the State Department.

It has on it representatives from the NSC staff, OSD, JCS, various components of State, and ACDA.

Senator NUNN. Thank you. Are they looking at the possibility of addressing the sustainability issue as a part of arms control?

That is, the supplies and materials by which the forces on both sides sustain themselves? Is that within the parameters of what is being looked at?

Mr. THOMAS. Yes, sir. We have looked at that. But as an indirect factor. We are looking particularly at the ability to mount an offensive. That relates directly to sustainability and the capability to generate forces and to support those forces.

That is an important component in our assessment of the Soviet alliance balance. We are not looking at it directly, but as it affects the force generation, basically.

Senator NUNN. What about discussions on military doctrine preceding substantive discussions?

By that I mean substantive discussions on the arms control issues being preceded by military to military type dialogue between the Warsaw Pact and the NATO alliance. Is that being given some consideration?

Mr. THOMAS. We are discussing this in NATO right now, and working up a position on the question of how to respond to a rather insistent Soviet desire to get into these talks. We approach these talks with great skepticism.

Senator NUNN. These talks being military to military talks?

Mr. THOMAS. They could be military to military. But I think the Soviets see them as having a civilian component as well.

The caution we have on this is that the Soviets would convert this into a forum for attacking NATO strategy, particularly first-use and MC 14/3 and its alleged offensive nature.

Senator NUNN. Why are we worried about that? I mean, if we cannot conjure up a good Soviet offensive threat to counter that with, then we do not have much imagination or sense of reality either.

I do not understand why we are worried about that being strong propaganda. We have got a lot more to talk about in terms of their offensive threat than they do about our offensive threat.

Mr. THOMAS. We are in fact working out within NATO what we think would be the best forum for this kind of discussion.

Now, we acknowledge the fact that inevitably in any kind of negotiation we will get into questions of doctrine. But to have a stand-alone doctrinal discussion is something else.

I think we are on the verge in NATO of coming up with a concrete proposal to respond to the Soviets. I agree that we are in a good position.

It is just that we want to make sure that it is not easy for the Soviets to get some sort of propaganda advantage.

Senator NUNN. Well, I would agree with that. I just think that we are very delinquent in dealing with these issues where our own public can understand them.

And I think that we have got to start addressing these things in a way that our own public can understand. For instance, the link between conventional disadvantages and our reliance on the early use of nuclear weapons.

Mr. THOMAS. Yes, sir.

Senator NUNN. I think that if our publics do not begin to understand it, the Soviets are going to have a field day over a long period of time. And we are going to have an erosion of public support for NATO strategy.

And the NATO posture seems to have been for some years that the public will not get alarmed if they just do not know anything about NATO strategy.

And I think that an alliance that spends more than the Warsaw Pact every year, and yet has to rely on the early first-use of nuclear weapons because of huge conventional disparities, has some explaining to do to their own public. And I think we better get out in front of that curve, instead of responding to it.

The Soviets have now proposed direct military to military talks, have they not, with Warsaw Pact-NATO?

Mr. THOMAS. Yes, sir. They have a number of proposals on the table, of which that is one.

Senator NUNN. NATO turned one of those down very quickly. Did they not?

Mr. THOMAS. We have turned down Pact-to-Alliance discussions basically on the grounds that we do not want to legitimize the Warsaw Pact as an organization that speaks with anything but the voice of the Soviet Union.

Of course NATO has a doctrine, but it is not a doctrine that is totally shared by all members. France, of course, does not accept 14/3. So you cannot really have that kind of discussion. We have turned them down when they have requested it.

Senator NUNN. Have we countered with anything, like the top U.S. military officials meeting with the top Soviet military officials?

Mr. THOMAS. Cap Weinberger has repeatedly offered to meet with Soviet Defense Minister Yazov. Clearly this kind of discussion of doctrine would be a topic that they could address.

The Soviet response has been to try to jam this discussion into the SCC context, and I think limit it to that material.

Senator NUNN. Well, I do not know what the forum ought to be or the procedure, and I know there are sensitivities, so I will not try to judge it.

But I do believe that military to military type dialogue about doctrine and so forth and about strategies is going to have to take place as a prelude to meaningful conventional arms control.

Because we have such disproportionate force structures, and such different force structures, and geographical differences that unless there is some foundation, I do not see conventional arms control going very far.

Mr. THOMAS. I think that we will come up, and fairly shortly, with a response to the Soviets that will make it possible to have that kind of doctrinal discussion.

Of course if we get into stability talks, there is no doubt there will be these types of discussions going on at the same time, because you cannot avoid it.

We would prefer to do it in that kind of context because then the doctrine is related to actual capabilities, and the Soviets would have to explain why they have the kind of capabilities they do while professing a defensive doctrine.

Senator NUNN. Yes, I think we have so much to talk about in terms of their offensive force structure, and I think the more we discuss that the more our own publics are going to understand.

And hopefully, if we have access to their public media, the more their publics will understand the offensive posture they are in, and the fact that they are indeed a threat, based on their own force posture.

And I also believe we have an awful lot to talk about to the Soviet public about the amount of money that they are spending on defense, which is at the expense of their own economy.

So I do not think we ought to feel defensive about taking the case to the Soviet public. I do believe that we are way behind in explaining to our own publics some of the anomalies of NATO's posture that are going to have to be addressed over time. Mr. Chairman, thank you very much.

Senator LEVIN. Thank you, Senator Nunn. Senator Quayle.

Senator QUAYLE. Why do you not go ahead with Senator Wirth, and let me just try to get caught up here a second.

Senator LEVIN. All right. Senator Wirth.

Senator WIRTH. Thank you very much, Mr. Chairman. Mr. Thomas, how important in this equation, how important is chemical weaponry? And how has that changed in the last 4, 5, 6 years?

Mr. THOMAS. The predominant fact in the chemical area is that the Soviets have a very significant stockpile of chemicals.

They train intensively in that area and have large numbers of units and troops that are devoted to chemical warfare, both of an offensive and defensive type. The West has been very tardy in meeting this threat.

In the last 7 or 8 years, there has been a major effort to equip NATO troops with chemically-resistant clothing and improved decontamination systems. We still lag behind in the defensive area. We have very reduced stocks of usable offensive chemical weapons.

Senator WIRTH. Why is that important?

Mr. THOMAS. I think it is important because having a credible chemical deterrent is the best way to prevent chemical warfare in Europe.

Even a madman like Hitler was deterred from using a very advanced chemical agent because he was under the misunderstanding that the research we were doing on DDT was actually nerve gas research.

So without that, or without an agreement that has credible verification procedures, I think we would need to have an effective deterrent.

The other aspect, of course, is that the only deterrent we would have is a nuclear deterrent. I am not sure that we want to trigger a nuclear war when the other side uses chemicals.

Senator WIRTH. Do we have specific discussions going on in the area of chemicals with the Soviets, or with the Warsaw Pact?

Mr. THOMAS. Yes, sir. We have discussions in the CD in Geneva on the overall idea of a chemical convention that would ban chemical weapons.

We also have frequent bilateral discussions with the Soviet Union on trying to advance these talks. So there is a lot of conversation going on between the two of us.

Senator WIRTH. How long has that been going on?

Mr. THOMAS. That has been going on for at least 5 or 6 years.

Senator WIRTH. And has that made any progress?

Mr. THOMAS. It has made a lot of progress in Geneva in the sense that there is a great deal of agreement between the two sides in that negotiating group on how to bring about a ban on chemical weapons.

Still, the really tough issue, which is verification, is far from being resolved.

Senator WIRTH. What kind of agreement has been reached in that area?

Mr. THOMAS. Well, the Soviets, for example, have agreed to on-site inspection, verification of destruction, and on the concept of a worldwide ban on chemical weapons.

Senator WIRTH. Similar to the question that Senator Nunn was asking about discussions from military to military, should we be escalating the discussions on the chemical weaponry, if in fact it is becoming a greater part of our concern and a greater part of the overall balance between the two?

Mr. THOMAS. I think you could not really escalate them much further. There are very intensive discussions going on already. We have bilateral discussions. It gets touched upon when the Secretary and Shevardnadze meet, for example.

So it is being treated at a very high level and it receives a lot of attention within the U.S. Government.

Senator WIRTH. Let me ask you a broader question, if I might, Mr. Thomas.

What incentive do the Soviets have, post-INF on the assumption that there is an INF agreement, what incentives do the Soviets have to negotiate in the area of conventional arms control?

Mr. THOMAS. The Soviets have been very eager to get into this negotiation. No doubt about that. And it was true in the Stockholm conference as well.

Senator WIRTH. Why?

Mr. THOMAS. We do not know what makes the Soviets tick on these issues. There are a variety of explanations.

One is the economic explanation. You really do not save money in strategic and nuclear arms control agreements to the extent that you do with conventional, where there is a lot of money that potentially could be saved. If the Soviets want to devote more resources to the civilian economy, that is one place to do it.

Another explanation is that Gorbachev, who is dealing with a really serious set of problems in the Soviet Union, wants to stabilize the situation in Europe so that he can pay more attention to those problems.

Another explanation is that they want to lull the West into a situation where the threat from the East appears much reduced, thereby cutting down on spending in Europe, and hopefully in the Soviet view leading to the withdrawal of U.S. troops from Europe.

I have no idea which one of these is motivating the Soviet Union.

Senator WIRTH. Those are the incentives on one side. What in your opinion are the major disincentives? Or what are the arguments weighing against Gorbachev pursuing in an aggressive and well-meaning conventional arms control discussions?

Mr. THOMAS. The principal argument, and I think the one that prevailed, at least until recently—certainly based upon their behavior in the MBFR talks—was that they did have a very significant superiority in conventional weapons. Which allows them number one, to control Eastern Europe, which I am sure is one of their bottom line requirements, and to some degree intimidate the West. And it gave them, I think, significant confidence that if there were a conventional war, they had a good chance of prevailing.

Senator WIRTH. We hear in the discussions of conventional arms control analyses given that we may be getting into a situation where the Soviets can put a great deal of political pressure on the NATO alliance, continue to do so, attempt to fragment the alliance or change that in such a way that is deleterious to our interests.

Why does the argument not work the other way just as well? That if you move on conventional arms control, the mirror on that, is potentially very threatening to the Soviets' control over Eastern Europe. This is a reason for them not to negotiate on conventional arms control.

Mr. THOMAS. I think that is a factor. I am sure some of the Soviet decisionmakers must raise that very problem.

Senator WIRTH. What is the answer to that?

Mr. THOMAS. The Soviets do not really need a whole lot to control Eastern Europe.

In the first place, the Eastern leadership has no particular interest in changing the situation, although the people certainly do. But the leadership does not.

The Soviet Union has clearly the ability, in a crisis in Eastern Europe, to move troops in if they have to—or just to demonstrate that they are prepared to do so, as apparently was the case in 1981 when they had large-scale maneuvers to intimidate the Poles.

Since they have a demonstrated record of not hesitating to move troops into unruly nose wipe countries, they——

Senator WIRTH. Moving troops into what?

Mr. THOMAS. Non-Soviet Warsaw Pact countries. The acronym is NSWP.

Senator WIRTH. Let me ask you what else could be on the table in these discussions, if the Soviets have an increased advantage in the conventional area.

What else has been proposed, by various quarters, that we put on the table as part of the negotiation to encourage them to obviously decrease in the area of conventional arms control, or to make it a better deal from their perspective?

Mr. THOMAS. I do not think that there is anything else that we would want to put on the table other than what we have been talking about within NATO so far, and what is basically contained in the mandate proposal that the alliance countries agree on.

I am not sure what you have in mind in terms of things that might fall into this category. We have looked at the whole range of possibilities. For example, we certainly do not want to put in naval forces or nuclear forces.

Senator WIRTH. I was thinking in particular about nonmilitary items that might get put on the table. Are there analyses that suggest that various trade incentives could be on the table?

Are there analyses that suggest that economic assistance could be on the table? That greater cooperation between West Germany and East Germany could be part of the package?

I do not know, I am just thinking out loud about other items in a nonmilitary way that could be part of such a package or have been proposed to be part of such a package.

Mr. **Thomas**. We have thought about this, but concluded that one of the important qualities of any proposal will have to be simplicity, so that publics really understand what we are talking about.

When we get too complex it becomes impossible to explain what we are up to. That has happened, I think, a number of times in MBFR. So that if you get into things like trade agreements and economic assistance, it becomes not only complex to explain, but also very hard to negotiate.

I think that what we are trying to do is hone this down to the simplest proposal we can make that will really get at Soviet offensive capability.

That is why there is a tendency to focus on items like tanks and artillery, which preeminently support that kind of activity, and which are very understandable to the public and do not lead to the kind of problems we encountered trying to deal with manpower.

Senator **Wirth**. Mr. Chairman, thank you very much.

Senator **Levin**. Thank you, Senator Wirth. I have just been informed by the majority leader that the independent counsel reauthorization bill is coming to the floor. That is a bill that I manage.

So I must go over to the floor to manage that. That takes precedence over this. Other members of the subcommittee and my colleagues will take over the chairing of this hearing.

I want to again express my thanks to you before I call on Senator Quayle, and also express my regrets to the other people who will be testifying that I am unable to stay here this morning.

I have a number of questions which I will just now have to ask for the record. These things sometimes happen and cannot be avoided. And it looks like this morning is one of these times.

Thank you again, Mr. Secretary. Senator Quayle.

Senator **Quayle**. Thank you very much, Mr. Chairman. Mr. Thomas, let me ask, as you go into these conventional arms control discussions, the assumptions that you are making.

Is one of the assumptions that you will be making and that you will have in the discussions with the Soviet Union that there in fact will be, and as long as perhaps the eye can see, or at least in the foreseeable future, that there will be a nuclear deterrent?

Or are we looking at the possibility of having an arms control process going on with the idea that perhaps we will not have a nuclear deterrent in Europe? Do you have an assumption that you are plugging in in relationship to the nuclear deterrent?

Mr. **Thomas**. We certainly do.

Senator **Quayle**. And what is that assumption?

Mr. **Thomas**. Our proposal will call for equality in conventional forces in Europe, but the danger in that kind of outcome and that kind of proposal is that it will be interpreted by the public as meaning that we do not need a nuclear deterrent anymore.

The fact is, even in an equal outcome, which I think is the only realistic negotiating proposal, you cannot be confident that the other side will not attack. There are numerous examples of this in history, and, of course, the Middle East is an example.

Certainly the German attack on France in 1940 is the preeminent example of a numerically and equipment inferior force attacking a larger force and prevailing.

So we think that the nuclear deterrent will and should be in place, even with total agreement on conventional equality in Europe.

Senator QUAYLE. So in other words, these talks do in fact assume into the future that we will always have a nuclear deterrent, as far as you can see?

Mr. THOMAS. Yes, sir.

Senator QUAYLE. Would you go through, and perhaps you did this, I was trying to just very quickly read your statement. And I apologize for getting in a bit late.

Could you go through as you visualize this the process that we are about to embark upon for the arms control discussions, and lay it out for us as easily as possible?

Mr. THOMAS. Sure. We are discussing right now in Vienna two types of negotiations that would emerge at the end of the Vienna review conference.

The first is a continuation of the Stockholm discussions on CSBMs. That would be a negotiation that would take place directly linked to the CSCE process. It would be on confidence-building measures.

The other discussion that is going on is among the 23 members of the alliance and the Warsaw Pact. That would be to draft a mandate to begin conventional stability negotiations.

This negotiation would take place within the framework of the CSCE process. But it would be autonomous. It would make its own rules; it would make its own schedules; and it would not be subject to the discipline or a significant reporting requirement to the CSCE as an institution.

So once it is launched out of Vienna, it would be on its own. It is there that we see the primary forum for this kind of discussion.

Now, we expect the CSCE review conference to end, not as we had hoped by the end of this year, but probably in the first quarter of next year.

This would, if we agree and if the Soviets are willing to make the necessary improvements in their human rights activities, make it possible to perhaps begin the negotiation at 23 by the first half of 1988.

So that is where we stand. The position of the Soviets in Vienna on the stability negotiations has been rather business-like. It seems to us right now that they are rather anxious to get into a conventional stability negotiation.

So I think there is a good chance that this will move ahead.

Senator QUAYLE. Did I hear you right that there is a linkage of progress in human rights to implementing the discussions on conventional arms control?

And if so, could you be precise about what that really is?

Mr. THOMAS. There is a one-way linkage, as we try to come to a conclusion at the Vienna review conference. Once that is achieved, the CSBMs, which stays within the CSCE process——

Senator Quayle. Excuse me. CSBMs are——

Mr. Thomas. Confidence and Stability-Building Measures. That negotiation remains directly and institutionally linked to CSCE.

It will always have some relationship to human rights. Once the stability negotiations get launched from this conference, they are on their own. They will not be linked to human rights directly in the CSCE process.

I should say, as I mentioned earlier before you were here, any kind of negotiation with the Soviet Union has to take place within the overall context of our relations. An important component of those relations is human rights.

As far as a direct linkage to CSCE, no, it would be off on its own.

Senator Quayle. Do you foresee any linkage of the conventional arms control talks with potential talks of reducing or eliminating the so-called battlefield nuclear weapons?

In other words, going to the, not the double zero, but the triple zero people are talking about. Do you foresee any linkage between those two things?

Mr. Thomas. No, we do not. There is, obviously some linkage of an abstract type, but we have forcibly resisted Soviet attempts to introduce battlefield nuclear weapons or as they have called it, tactical nuclear weapons, into these negotiations. We will continue to do so.

Even if we did not do so, the French would be adamantly opposed and would not agree to any negotiation that include those systems.

Senator Quayle. Do you anticipate the Soviets continuing to push the idea that tactical nuclear weapons ought to be linked to conventional talks in the conventional arms control process?

Mr. Thomas. I think they will. I think they have been sort of backing off on that area, because they are anxious to get into these negotiations. They understand our arguments.

In our most recent discussions in Moscow they were talking about sort of indirectly linking them to, number one, the treatment of dual capable systems, and number two, having some sort of commitment that we would at some point in the future be willing to discuss tac nucs in the context of conventional negotiations.

I think they are slowly moving in the direction of not having them included in the mandate.

Senator Quayle. So, putting aside the strategic, the START and space defense talks, and just looking at arms control talks as far as Europe would be concerned directly, the basic picture in the platform that we will be discussing in the future will be on the arms control process.

You do not envision us getting into a discussion of the tactical or battlefield weapons? You think the main emphasis will be and should be first and foremost in the conventional arms control talks? Is that correct?

Mr. Thomas. Yes, sir. That is correct. That is the position that was basically taken at the Reykjavik meeting. Paragraph eight of the Reykjavik communique calls for a comprehensive look at the arms control situation, but in such a way that we would not immediately jump into another third zero or negotiations under 500.

Senator QUAYLE. And that is understood by the Soviets, but not accepted? They understand our position, but they do not agree with it. Right?

Mr. THOMAS. We have been quite adamant at the negotiating table on that subject. I know they understand what our position is.

They keep on trying to maneuver around it. We spent 3 hours in Moscow talking about this subject. They tried various ways of getting us to include nuclear weapons.

Senator QUAYLE. What other hurdles do you see before we get down to substantive discussions on the arms control talks?

Are there some things out there that we ought to be looking for to show progress? The lack of progress? In your judgment, what are some of the key discussion points that we are going to have between now and the next 6 or 8 months before we get down to actually talking about this?

Mr. THOMAS. I think that the process in Vienna will move along at its regular pace. There is not a great deal that we can do that we are not already doing to move that forward.

The one thing that we would like very much to do is to be able to agree within the alliance on the sort of grand outlines of a proposal. With that in hand, I think we would be in a much better position as we move into this negotiation. And be in a better position to carry out some of the educative function with our own public that Senator Nunn was talking about.

Senator QUAYLE. Let me ask one final question. As we look to discussing the qualitative aspects of the Warsaw Pact, NATO Pact, sustainability, readiness, training, things of that warfighting capability, what kind of difficulties will we have in getting good, competent verification of these qualitative aspects?

In other words, how are we going to be able to ascertain the quality of Warsaw Pact readiness, sustainability, how they are going to be able to have the warfighting capability?

It seems to me that verification, as is the conventional wisdom today, shows there is an exact science to it. If you start looking at these types of things on verifying, we may have to come up with a different thesis, because it is going to be, at least in my opinion, rather difficult to get this qualitative verification.

Yet I believe that that sort of an objective that we would have of the arms control process, that we are not just interested in bean counting, we are interested in how does one provide for rough equivalence or parity.

How do you in fact, verify as we know verification today the qualitative aspects of conventional armed forces?

Mr. THOMAS. Basically, in certain categories we cannot do it and probably never can. We could not, for example, count morale or the quality of training.

There is, I think, the possibility of getting at the question of sustainability, because that is quantifiable.

There is a difference between bean counting, which is sort of assessing the static balance, and a more dynamic look at the situation based upon the capability of the Soviet Union to reinforce and to generate a response.

Some work has been done in this area. The Rand Corp. has done quite useful work in looking at a dynamic picture of what happens, and what kind of implications this has for arms control.

I do not think that we should try to control those elements which are essentially nonverifiable. And there is a whole range of those things.

If we look at the major types of equipment, for example tanks, that is something that we can quantify and get a handle on and keep track of. Regarding morale, we would never be able to feel confident that we understood the situation adequately.

Senator QUAYLE. On getting our hands on quantifying, say, tanks, would our proposal be one to look at withdrawal of tanks, say, on both sides?

Or would we be advocating, like we are doing in the INF talks, an actual destruction of these systems? Are we just going to say just withdraw them, put them in storage? Or deploy them on the borders of Afghanistan or China or somewhere like that, but not in Europe?

Or are we actually going to look for the destruction of these systems?

Mr. THOMAS. Both of these are possible. They both have utility. If the Soviets started to thin out their tank forces in Eastern Europe, it clearly would be a plus for the alliance.

If they started moving tanks back and forth into the area around the Urals or behind the Urals, it would be a plus because it would have a drastic effect on their reinforcement capability.

We have not worked out this question yet as to what you do with systems that are withdrawn.

Senator QUAYLE. So we have not come to the conclusion whether we ought to advocate just withdrawal, or we should advocate actual destruction.

Mr. THOMAS. Right.

Senator QUAYLE. Do you have a personal opinion?

Mr. THOMAS. I suspect that as a practical fact, you would be pushing for withdrawal and not destruction.

Senator QUAYLE. And why is that?

Mr. THOMAS. Simply because of the enormous reluctance on the part of the Soviet Union to destroy anything, and because we can achieve our objectives by moving these things away from the front.

Senator QUAYLE. So our objectives would be achieved if we just get them sort of out of sight, move them east?

Mr. THOMAS. Far enough east so it makes it much more difficult to generate an offensive capability.

Senator QUAYLE. Thank you, Mr. Chairman.

Senator WIRTH [presiding]. Thank you very much, Secretary Thomas. We appreciate your being here and look forward to working with you on this extremely important agenda for all of us, and appreciate your thoughtful testimony and your time this morning.

Mr. THOMAS. Thank you.

Senator WIRTH. Our next witnesses this morning are a panel of two, who I hope will join us at the witness table this morning.

Ambassador Jonathan Dean, former U.S. Representative to the MBFR negotiations and currently arms control advisor for the Union of Concerned Scientists. And Mr. Phillip Karber, the vice president and general manager for National Security Programs at the BDM Corp.

Gentlemen, thank you very much for being with us this morning. And I would hope that you are familiar with the rules of the committee. We will include your statements in full in the record, and would hope that you would summarize those in whatever way you feel would be most helpful to the committee.

We are delighted to have you here. I know you are aware of the problems that Senator Levin had with his conflict on the floor. But with his apologies, we would ask you to proceed in whatever way you think is most appropriate. Ambassador Dean, why do you not begin?

STATEMENT OF AMBASSADOR JONATHAN DEAN, FORMER U.S. REPRESENTATIVE TO THE MUTUAL AND BALANCED FORCES REDUCTIONS (MBFR) NEGOTIATIONS

Ambassador **DEAN**. Thank you, sir. I have submitted a statement for your record, and will summarize it.

When the new NATO Pact Atlantic to the Urals force negotiations open next year, the big open question is going to be the Soviet position in them. That is to say, whether the Soviet Union will be prepared in these new talks to make the same kind of numerous and far-reaching concessions that it has made in the INF negotiations. Or whether the Soviet Union is going to take the same unyielding position which for 14 years has made the MBFR talks in Vienna a classic example of unproductive and trench-warfare arms control.

It is already clear that the NATO position in the new talks is going to be even more demanding than it was in INF or MBFR. However, there is some interesting evidence arguing for possible Soviet flexibility in meeting Western demands. But the evidence against the Soviets showing such flexibility is equally weighty. As a result, predicting an outcome for these new talks is very difficult. Nonetheless, I will attempt to forecast at the conclusion of my comments.

The starting positions of both alliances are already emerging in outline. It appears that NATO may ask for parity between the alliances in a number of ground force components, possibly tanks and artillery, at a level slightly below NATO's present holdings. For its part, the Warsaw Pact has already suggested in its Budapest declaration of June last year that the present East-West force balance should be use~~d as~~ a basis for equal number, equal percentage reductions, the same position which the Warsaw Pact took in the MBFR talks.

Needless to say, there is a wide gulf between these two positions. The Warsaw Treaty position would preserve Pact numerical superiority, no matter what the level.

Thus far, the underlying weakness of the Western position for these new talks, a fault which hopefully can be corrected, is that the Western position is purely defensive, limited to operational considerations of maintaining alliance cohesion, and of keeping NATO reductions to a minimum. These considerations are of course valid as far as they go. But NATO cannot have an effective negotiating strategy for these new talks without having a serious long-range objective.

Officially—we heard Mr. Thomas say it again this morning—the NATO countries refer to these pending negotiations as force stabilization talks. But it is an inadequate objective to stabilize the huge East-West military confrontation in Europe, which includes 6 million active duty personnel on both sides, and consumes at least two-thirds of the world's trillion dollar annual expenditures on armed forces, while continuing that confrontation indefinitely.

The East-West confrontation in Europe is already quite stable. The real question is whether it is functional, whether it has a serious reason for existence at its present dimension. It does not. Therefore, the NATO objective should be to reduce that confrontation, and to build it down in acceptable ways to the extent possible.

NATO's disinclination to take a broader approach on these issues is understandable, as long as the view of NATO military commanders, that the East-West military confrontation will continue indefinitely and that the pending force talks are only an episode in that continuing confrontation, is dominant in shaping the NATO negotiating position.

I have genuine respect for the officers who hold this position. I know a great many of them. It is their professional duty to warn us of the most dangerous and damaging possibilities in a given situation.

But can we leave the definition of military security solely in the hands of the military on both sides? If so, we may be condemned to a worst-case analysis, and to an indefinite continuation of the military confrontation in Europe, long after the Cold War in Europe has peaked politically, which happened a decade ago. Therefore, along with the military component, there has to be some political input in the definition of security and in the definition of NATO objectives in these pending talks.

These shortcomings in NATO's position may not have serious consequences if the Soviets again show flexibility in the new talks. If they do not, there may be serious consequences.

First, a defensive strategy cannot fully exploit potentialities for movement, even in a less flexible Soviet position. And second, there is a wide divergence between the views of many NATO governments and the hopes for the new talks of the European public and opposition political parties. These groups may press for Western concessions, if the talks drag on, or if they consider NATO's negotiating position unreasonable or unserious.

NATO's problem is compounded by the fact that there is a wide spectrum of similar divergences among the NATO governments. Consequently, in forming its negotiating position for the new talks, NATO as a coalition will be reduced to a common denominator even lower than usual. And for its part, in its last year of office, the administration, worried about the adverse reaction of European conservatives to the INF agreement, and with other priorities on its mind, is likely to maintain a low profile, and to avoid the frictions of vigorous leadership.

All of this means that, in the forthcoming negotiations, as in the INF talks, the Soviet Union will be called upon to take the initiative to move toward a passive but demanding NATO position. And, although it is hard for westerners to accept that they are not in a position to be on the initiative, this pattern of negotiation may nevertheless, once again, turn out to be a productive one.

The concept of parity in armored forces at lower levels, toward which several NATO countries appear to be steering, is a good choice as a reduction approach. It establishes a goal which can be clearly understood by the public, which is inherently equitable, which provides for some modest NATO reductions necessary to demonstrate to Western publics that NATO is seriously interested in an outcome, and which is flexible in the sense that it can be achieved in stages or area by area in succession.

But when we get to the actual figures, the dimensions of the negotiating tasks become more evident. If NATO asks for an equal ceiling in main battle tanks between the two alliances at 20,000 tanks per alliance, this would mean a total NATO reduction of about 5,000 tanks, but a Pact reduction of well over 25,000 tanks. The situation is similar with artillery.

How should this large reduction be broken down into workable segments? What should be the first step?

Tank and artillery parity in Central Europe in active duty units, with constraints and verification applied to the remaining area would be a good move. But it will not be easy to gain agreement with the Warsaw Treaty on how this central area should be defined.

Should NATO propose reducing other types of equipment beyond tanks and artillery? That issue has come out already in this hearing. What about combat aircraft and tactical nuclear weapons? The Pact has, as we know, proposed reduction of both. NATO has, as we heard again this morning, strong reservations about including them. NATO governments fear, as we heard also, a Soviet offer to reduce tactical nuclear weapons to zero, backed by an appeal to Western public opinion.

Yet in terms both of practical politics and of negotiating leverage, it will not be desirable to indefinitely exclude tactical nuclear weapons from the new negotiations. All the political parties in the Federal Republic of Germany, reflecting overwhelming German public opinion, are pressing for their reduction. There is too much weight here to resist it indefinitely.

Moreover if the NATO countries are serious about reducing the risk of surprise attack and about really achieving Soviet agreement to accept Soviet and Pact reductions far larger than those of NATO, they may want to think at some point in the talks, if the Soviets show serious inclination to move toward the NATO position, of trading some part of NATO's technological superiority in this area against larger Soviet reductions. More specifically, if the Soviets show serious interest in tank and artillery parity, NATO could consider adding to its own limited reductions of these weapons a 25 percent reduction of NATO fighter bombers and a reduction of NATO tactical range missiles, including the pending Lance follow-on missiles and ATACM conventional—warhead missiles, to a combined level of 200-300, in return for reduction of Pact tanks and artillery, fighter bombers, and tactical range missiles to an equal level with NATO. This would mean parity at reduced levels in four weapons systems. Tanks, artillery, fighter bombers, tactical missiles, and possibly also attack helicopters.

Negotiated parity in tactical range missiles would reduce a very large Warsaw Treaty superiority, and might provide the only feasible route for deploying a Lance follow-on missile in Germany, or for avoiding the total elimination of NATO tactical nuclear armaments, feared by some experts. More importantly, it would avoid the expensive and destablizing competition between the two alliances in deploying tactical range missiles with conventional warheads, and then deploying defenses against these same missiles, a development which is on the horizon.

Given the probable difficulty of reaching early agreement on reductions, it is essential for NATO to accompany its reduction approach with proposals for constraints or restrictions on military activities and deployments, for example, limits on the amount of ammunition and fuel which each alliance would be permitted to load when going on exercises. Agreed constraint measures might also meet public pressures for progress in the new talks.

One possible measure would be to pull back major and ammunition and fuel storage depots 100 kilometers or so behind the dividing line between East and West Germany. This addresses directly the issue of sustainability, which has been raised here. The further back these depots are located, the harder to sustain a forward-moving attack. If the depots cannot be moved by agreement, then they could nonetheless be placed under agreed observation by personnel of the opposing alliance.

Another possible measure, properly speaking a confidence-building measure, might be to establish an air zone along the dividing line between the two alliances where surveillance aircraft of both alliances could patrol without interference, including electronic interference. This would make a real contribution to early warning.

At the outset of this analysis of the prospects for the new talks I raised two possible Soviet patterns of behavior. In the first case, where the Soviets show flexibility, it is possible that the Soviet Union will move more than half way toward accepting the Western position. But what if the Soviet Union, because of the sheer size of the reductions proposed by the West, the vested interest of the Soviet ground forces, which are great, or concern over the effects of large Soviet reductions on political stability in Eastern Europe, is uncooperative on the MBFR pattern?

In that case, it seems to me, Western governments may find that their opposition parties and political opinion are less of a hindrance and more of an asset then is now feared by Western officials. Most of these groups will recognize it if the Soviets are offering to do little or nothing to build down the confrontation in Europe. The Soviet Union will face loss of the gains it has made in Western European opinion, if Soviet behavior in the force talks is not consistent with their actions in the strategic nuclear talks, or their general posture in East-West relations. There can be progress here too, although slower.

To sum up, lacking a clear long-term objective, and reacting to Soviet positions, rather than attempting to take the lead toward a long-term goal, NATO may be backing into at least moderate success in these new talks. The real debate in the West may be less whether the Soviet Union is willing to reduce its forces than whether the Soviets are willing to reduce enough.

It may avoid misunderstandings if we tried to get an idea of what may be possible on this score. In the course of time, it seems likely there will in fact be some slow shrinkage of the European military confrontation on both sides, from the combined effects of arms control, confidence-building measures, force rationalization, and economic factors. Yet, even if the Pact numerical superiorities can be chipped away, the level of the confrontation lowered considerably, and the confrontation made more shock-resistant through agreed constraints, the remaining confrontation is likely to be substantial and durable. It is hard to conceive of a practical situation where the two alliances do not continue indefinitely. The clash and the competiton of the Western and Pact social systems will certainly continue.

But it should be the general objective of Western policy to reduce the military component of that competition as far as possible.

So there are both dangers and opportunities in the openings created by the emergence of a reform-minded Soviet leadership. But more opportunities than dangers. And more opportunities than NATO now appears ready to exploit during the next 5 years, while this reform effort is still at its height. Thank you, Mr. Chairman.

[The prepared statement of Ambassador Dean follows:]

PREPARED STATEMENT OF JONATHAN DEAN, FORMER U.S. REPRESENTATIVE
TO THE MUTUAL AND BALANCED FORCES REDUCTIONS (MBFR) NEGOTIATIONS

Will Negotiated Force Reductions Build Down the NATO-Warsaw Pact Confrontation?

When the new NATO-Warsaw Pact, Atlantic to the Urals force negotiations open next year against the background of a recently signed US-Soviet agreement to eliminate land-based intermediate-range missiles, the big open question will be the Soviet position. That question will be whether the Soviet Union will be prepared in these new talks to make the same kind of numerous, far-reaching concessions to a highly demanding Western negotiating position which it made in the INF talks, or whether the Soviet Union will take the unyielding position which has for fourteen years made the MBFR force reduction negotiations in Vienna a classic example of unproductive, trench warfare arms control.

It is already clear that the NATO position in the new talks will be even more demanding than it was in INF or in MBFR. NATO will in practice be calling for elimination of the large Warsaw Pact numerical superiority in armored forces - tanks, armored personnel carriers, self-propelled artillery and attack helicopters. At present, the evidence for possible Soviet flexibility in meeting these exacting Western demands and the evidence against the Soviet's showing such flexibility is closely balanced. As a result, prediction of an outcome for these new negotiations is very difficult.

On the positive side, arguing for a show of Soviet flexibility, is the record of the Gorbachev leadership in making concession after concession to the Western position on arms control, not only in INF, but also in strategic reductions, prohibition of chemical weapons production, confidence building measures and verification.

Moreover, Gorbachev and other Pact leaders have stated their readiness in the new talks to negotiate the reduction of asymmetries or superiorities in individual armaments on both sides, implying a willingness to accept parity between NATO and the Pact in individual types of major weapons. (In evaluating these statements, we should bear in mind that Soviet officials also made them in the MBFR talks, and that the Soviet claim some superiorities on the NATO side.) Further on the positive side, if the USSR wishes to devote more resources to the modernization of its economic system, it has an evident need to make cuts in its ground forces, which are by far the most expensive part of its armed forces. Soviet leaders also are aware of the requirement to deal with Western European concerns over Soviet military power if they wish to establish a more productive relationship with Western Europe and the United States - not only a period of calm in Soviet external relations, but a source of credits, managerial skill and modern technology to assist in the modernization of the Soviet system.

Thus far, indicators for a negative, MBFR-type Soviet response to the Western reduction proposals are equally impressive. They include the fact that the Warsaw Pact now has a numerical superiority in many major armaments which it may consider highly advantageous and might be unwilling to trade off in the absence of a Western quid pro quo of equal military value; the sheer scope of the concessions the West will ask for; the conservatism of Soviet defense doctrine, based on massive armored counterattack from forward positions; the deeply entrenched status of the Soviet ground forces, which are the senior branch of the Soviet armed forces - here, there is almost no evidence of give; and the apprehensions of Pact and Soviet leaders alike over the potentially highly destabilizing effects in Eastern Europe of large scale Soviet withdrawals.

This last factor is especially important: it is central for these new negotiations that none of the governments of Eastern Europe could sustain themselves without the presence of Soviet forces in the country or on its borders to prop it up. The Soviet Union could probably effectively maintain the governments of Eastern Europe with fewer than a third of its present forces, but there are no objective criteria in an issue which depends so much on psychological and political factors. Because this issue is directly linked to survival of the Warsaw Pact system and to possible causes of war, both Soviet and East European leaders are likely to be conservative in approaching it.

Elements of the NATO Position

The starting positions of both alliances for the new talks are already emerging in outline. NATO will ask for parity between the alliances in a number of major ground force components, possibly tanks and artillery, at a level slightly below NATO's present holdings. For its part, the Warsaw Pact is likely to use as the basis of its position its emerging doctrine of reasonable sufficiency or adequate defense at lower levels, but will claim that, when all force components are taken into account, there is a rough balance between the forces of both alliances.

Consequently, as it did in the MBFR talks, the Pact has already suggested in its "Budapest Declaration" of June 1986 that the present East-West force balance should be used as the basis for equal number or equal percentage reductions in the new talks.

But NATO will categorically reject agreements which "contractualize" or give treaty sanction to Warsaw Pact numerical superiorities in individual weapons and which would cause NATO to relinquish all future possibility of increasing its own holdings of one or the other of these types of weapons.

Needless to say, there is a very wide negotiating gap between NATO's certain insistence on much larger Pact than NATO reductions and the Pact's equal number or equal percentage reduction approach.

The NATO defense experts and senior military commanders who have the biggest say in formulating the NATO defense position seem to be basing their approach to the new talks on the assumption, proper for military officers who are professionally obliged to base their assessments on worst-case assumptions, that the East-West military confrontation will continue indefinitely and that little can be expected from the forthcoming talks. Members of this group view the new East-West negotiations with apprehension, considering them more of a trap than an opportunity. They are worried that the INF agreement has weakened flexible response and American nuclear protection through pending elimination of the Pershing 2s and that the Soviet Union, using Western public opinion as a lever, will use the new talks to complete the denuclearization of Europe.

Consequently, today there is considerably less willingness in NATO to make reductions in its own conventional forces than when the negotiations on Mutual and Balanced Force Reductions began in 1973. Although aggressive Soviet attack on Western Europe is most unlikely, most NATO governments, especially those with forces in the area of the most intense East-West confrontation, Central Europe, do not consider they can afford to reduce

NATO forces because these forces are spread very thin over a fixed geographic defense line, facing Pact forces which have improved their firepower and mobility over the past decade.

Given the assumption of most senior NATO officers that the NATO-Warsaw Pact military confrontation will continue indefinitely with only minor changes, NATO commanders want to improve these forces, not reduce them, particularly now, given intensified post-INF worries over the future of American extended deterrence.

In the United States, the Joint Chiefs of Staff fear that negotiated American withdrawals from Europe would lead Congress to mandate a reduced personnel ceiling for the entire US Army. Senior UK officers have a similar view. France, which is joining an arms control negotiation involving force reductions for the first time since the collapse of the Four Power talks in Germany in the late fifties, apparently wants neither reduction of its own or other NATO forces. For those who consider that the Soviet Union will remain a direct military threat to Western Europe until its Marxist-Leninist system disappears, even complete elimination of Pact superiorities in major ground force armaments is no solution; it would leave NATO governments with the requirement to maintain NATO forces against the next manifestation of Soviet pressures, but deprived of the public support needed to do so. For most NATO governments, the new negotiations are a damage limiting exercise, not an opportunity.

As a consequence, the underlying weakness of the Western position for the new talks - a fault which hopefully can be corrected in the next administration - is that the Western position is purely defensive, limited to the operational considerations of maintaining alliance cohesion and limiting damage to

NATO's current force posture. These considerations are valid as far as they go. But NATO cannot have an effective negotiating strategy for these new talks without having a long-range objective.

Officially, the NATO countries refer to these pending Atlantic to Urals negotiations as force stabilization talks. Yet merely stabilizing the huge East-West military confrontation in Europe, with six million active duty personnel on both sides consuming at least two-thirds of the world's trillion-dollar annual expenditures on armed forces - and indefinitely continuing that confrontation - is an inadequate objective. The East-West confrontation in Europe is already quite stable. The question is whether it is functional, whether it has a serious reason for existence in its present dimensions. It does not. The Western objective should be to reduce the confrontation and to build it down to the extent possible.

NATO's disinclination to take a broader approach is understandable as long as the view of NATO military commanders that the East-West military confrontation will continue indefinitely and that the pending force reduction talks are only an episode in that continuing confrontation is dominant in shaping the NATO negotiating position. We must have genuine respect for this position and for the officers who hold it. This is the professional advice our societies pay them to give and we must always keep their warnings in mind. But can the definition of military security be left solely in the hands of the military on both sides? If so, we are condemned to worst-case analysis and to indefinite continuation of the military confrontation in Europe long after the Cold War in Europe has peaked politically, which happened more than a decade ago with the Federal German treaties with the Soviet Union, Poland and the GDR, with the Berlin agreement, and with the erosion of the Western European communist parties and Moscow's control over them. Along with the necessary military component, there must be some political input into the definition of security.

Problems of the NATO Position

These shortcomings in NATO's position may not have serious consequences if the Soviets again show flexibility in the new talks. If they do not, there may be serious consequences: First, a defensive strategy cannot fully exploit potentialities for movement even in an unyielding Soviet position. Second, there is a wide divergence between the views of many NATO governments and the hopes for the new talks of the European public and of opposition political parties in Europe.

A small group in Western public opinion has decided, without adequate foundation, that fundamental change in the Soviet system has already taken place. But by far the largest body of Western European and American opinion, still sceptical about Soviet intentions and about the prospects of fundamental reform inside the USSR, but encouraged by the prospective conclusion of an INF agreement, hopes for similar progress in building down other aspects of the East-West military confrontation in Europe. Correctly, this majority has concluded that it is not necessary to await prior fundamental change in the Soviet system before concluding arms control agreements with the Soviets - provided that these agreements can be stringently verified. During the new talks, it is likely that the hopes of the European public will be maintained by continued progress in the strategic arms talks and other arms control negotiations and also by deliberate Soviet efforts to exploit these hopes as sources of pressure in the new talks. Public interest in a favorable outcome will also be fuelled by the economic problems of Western economies, especially the American economy.

We can already foresee some possible consequences of this opinion gap as it may affect the new negotiations. First, there may be low public support and high public impatience with a NATO negotiating position which demands Warsaw Pact reductions five to six times larger than NATO reductions and is bringing no negotiation results. A second consequence may be a major public debate, if, as is possible, the Soviets later move toward to meet the NATO negotiating position offering considerable asymmetrical reduction of their forces, but some NATO defense experts conclude that anything short of acceptance of NATO's full position will damage NATO defense.

These considerations help to explain why several NATO governments consider the Atlantic to the Urals talks as an exercise in damage limitation and why some tend to view their own public opinion as an adversary even more dangerous than the Soviet Union.

NATO's problems are compounded by the fact that there is a wide spectrum of divergences among the NATO governments - for example, between the French government, which wishes no reduction whatever of NATO forces, and the Federal German government, which considers some builddown of the confrontation on both sides necessary to meet its own different public opinion, or the Greek government, which has come out for elimination of American military bases and supports the Soviet proposal for a nuclear-free zone in the Balkans. As a consequence, in formulating its negotiating position, NATO as a coalition is reduced to a common denominator which will be even lower than usual. For its part, in its last year of office, the Reagan administration, worried about the adverse reaction of European conservatives to the INF agreement, and with other priorities, including arms control priorities on its mind, will probably maintain a low profile and avoid the frictions of vigorous leadership.

All of this means that, in the forthcoming Atlantic to the Urals negotiations, as in the INF talks, the Soviet Union will be called on to take the initiative to move toward a passive but demanding NATO position. Although it is hard for Westerners to accept that NATO is not in a position to be on the initiative, this pattern of negotiation may nevertheless once again turn out to be a productive one.

Emergence of the NATO Negotiating Position

These factors clearly also have a bearing on the formulation of the NATO negotiating position. Fortunately, despite them, this position already appears to be developing in the right direction. As in the MBFR talks, there is a recognition that the preponderance of Soviet armor is the main problem. And, as in MBFR, NATO is once again moving toward the concept of parity between the two alliances at lower levels as its guiding principle.

NATO has also made some advances since the MBFR talks. It has learned the drawbacks of sole focus on manpower reductions on which NATO - mainly European NATO governments - insisted in the earlier talks. It has also learned from hard MBFR experience that it is not necessary to reach pre-reduction agreement on the starting level of forces, but rather to establish a clear goal toward which both sides will reduce and then verify the outcome stringently. Despite this advance, it might not be a bad idea in the new talks to test Soviet willingness to agree on an initial exchange of data backed if needed by on-site inspection. There is some evidence of Soviet willingness to agree to this, but it is inconclusive. If the Soviets object, NATO could fall back to the position just described.

NATO is now willing to focus on armament reductions even at the cost of the small reductions of its own armaments which European NATO members rejected in MBFR; it has also overcome its earlier reservations about asking for the improbable and has now decided to ask for much larger Pact reductions relative to NATO reductions than it did even in MBFR.

What should be the immediate Western objectives in the new negotiations? Given the most pressing Western European fears about an eruption of the NATO-Warsaw Pact confrontation, a reasonable general objective should be two-fold: 1) through force reductions and other measures, to decrease the potential of both alliances to attack with minimum warning, and 2) to reduce the possibility of inadvertent escalation to conflict (or in intensity of conflict, once begun), in the event of incidents, political crises, or of East-West confrontations in third areas. Both alliances may be willing to agree on such general wording.

It would be advantageous if the new talks could be introduced by an exploratory phase before specific reduction proposals are presented. Typically, once reduction proposals are formally advanced, they harden like cement. Both sides may be able to save themselves years of diplomatic chipping away at embedded future positions through discussing each other's general views first. To give this exploratory phase a practical, applied framework, it could be combined with an exchange and discussion of information on each other's forces.

Force Reductions

The concept of parity in armored forces at lower levels toward which NATO appears to be steering is a good choice as a reduction approach. It establishes a goal which can be clearly understood by the public, which is inherently equitable, and which is flexible in the sense that it can be achieved in stages, or area by area in succession, and which also provides a framework for NATO to add further inducements if the Pact shows serious interest. Other reduction alternatives, like reduction ratios based on estimated divisional firepower, estimated rate of Soviet reinforcement as compared to the US, and percentage of foreign to domestic forces, have considerably less built-in logic.

But when we get to the actual figures, the dimensions of seeking parity become more evident. If NATO asks for an equal ceiling in main battle tanks between the two alliances at 20,000 tanks per alliance, which is a logical and desirable long-range aim, this would mean a total NATO reduction of perhaps 5,000 tanks, but a Warsaw Pact reduction of well over 25,000 tanks. The same is true for artillery.

How should this large reduction be broken down into workable segments? What should be the first step? Tank parity in Central Europe as an inner circle, with restrictions on military activities and verification applied to the remaining Atlantic to Urals area would be a good move, because Central Europe is the area of greatest East-West force concentration and the vital area for both alliances. Moreover, for NATO, it would not make sense to permit the Soviet Union to reduce obsolescent tanks in its many reserve divisions back in the USSR while NATO forces in Germany reduce modern tanks from their lesser number of active-duty units. Reductions should be in a Central European zone and they should be from active-duty units with 50% or more of their combat level manpower on hand, corresponding to Soviet Category 1 and 2 units, not from reserves, which can be tackled at a later stage of negotiation. The considerable number of tanks and other reducible armaments already in storage on both sides should not be included in the count, but should be placed under agreed supervision by the other alliance.

There are divergent ideas within NATO as regards design of the zone for initial reductions. Federal Germany and other NATO countries sensibly want to include the Western Military Districts of the USSR in this Central Zone; these districts contain the Soviet reserves which would be involved in conflict in Central Europe. Other NATO members like France appear to have other ideas on how to delineate a central zone. The Soviet Union too appears to be moving toward the idea of a first phase in Central Europe, but evidently intends to hold back some portions of its own territory in the USSR which NATO would like to include in this inner Central European circle. It is already evident that agreeing on what area should be included in a Central European zone will be a difficult negotiating task[1], as was the case in MBFR, where dispute over inclusion of Hungary held up the preparatory talks for four months.

What about the form in which reductions, once agreed, should be taken? For reasons of verification and military effectiveness, both the Pact and NATO generally favor reductions by units. But some NATO countries like Federal Germany want to take their own reductions through thinning out individual armaments. Others, like the US, wish to have full flexibility in reorganizing their post-reduction forces.

But can it be expected that the Soviet Union will agree to withdraw entire divisions and keep them out of the reduction area under a residual ceiling on its forces while NATO forces take reductions in any form they wish and feel free to reorganize them after reductions? This is unlikely. There are two possible solutions. In the first, reductions would be in the form of specific units - tank regiments for the USSR and at least tank battalions, which are smaller, for NATO, with a ceiling on the number of such units which can be deployed after reductions. Participants whose entire territory and forces are located inside the reduction area, e.g., West and East Germany, should be free to take their reductions by converting active duty units to reserve status while preserving larger organizational structure. Both alliances should be permitted to reorganize those forces not reduced on the basis of notifying the other alliance of organizational changes. The second possibility is to limit reductions to armaments, rather than to less verifiable manpower and to permit the reducing country to reassign its manpower as it desires. This might permit the Soviets for example to keep the personnel of former tank units in East Germany, but reorganized as infantry, not armor.

What is to be done with withdrawn armaments? NATO will want the Soviets to station withdrawn forces behind the Urals, but will also insist that all NATO allies with forces in Germany should have the right to store their reduced armaments there. In the case of US forces, such differentiated treatment is justified by the distance of the US from Europe in the event of reinforcement. This geographic disparity might also justify a Western requirement that withdrawn Soviet forces should be reduced to reserve status, while withdrawn US forces could be kept on active duty. In the long run, it may prove possible to destroy reduced armaments under supervision, as will be done under an INF agreement. But in practical terms, this would require a ceiling on Soviet and US armaments deployed outside the area of reductions, something NATO has rejected without much serious consideration for the potential benefits to the West. For the moment, turnover of reduced armaments from active duty units to reserve units or to storage under supervision of the opposing alliance is probably a reasonable and more conservative first step.

The European NATO allies will also wish to have a specific residual limit on USSR forces or armaments while not accepting national ceilings on their forces except perhaps on US forces. This issue, another holdover from the MBFR talks, is an additional negotiating difficulty. Indeed, in every aspect of these new negotiations, the amount and nature of reductions, the disposal of reduced forces, the nature of residual ceilings, the NATO participants will be asking for important concessions from the USSR while offering little or nothing in return. The Soviet willingness to show flexibility will be more crucial than ever.

Should NATO propose reducing other types of equipment beyond tanks and artillery? Naval forces will be excluded by mutual agreement though the day when they are drawn into East-West arms control negotiations should come. What about fighter-bombers and tactical nuclear weapons? The Pact has proposed reduction of both. NATO has strong reservations about including them. NATO countries, among them the US, UK and France, believe that a halt or firebreak should be placed on reducing nuclear-delivery systems like dual-capable aircraft, those capable of delivery of both conventional and nuclear warheads, and tactical nuclear missiles. They fear repetition of Soviet tactics on INF: an offer to reduce to zero backed by an appeal to Western opinion.

France in particular, whose public opinion is as anti-nuclear as that of most Western European countries, but which lacks the close linkage of the other countries between public opinion and the political level, wishes to avoid any discussion of nuclear armaments.

Yet in terms both of practical politics and of negotiating leverage, it will not be desirable to indefinitely exclude tactical nuclear weapons from the new negotiations. All political parties in the Federal Republic of Germany, reflecting strong German public opinion, are pressing for their reduction. Given Federal Germany's weight in the alliance and continued Soviet pressure for nuclear reductions, NATO should at some point be prepared to make a virtue of necessity. Moreover, if the NATO countries are serious about reducing the risk of surprise attack and about really achieving agreement to accept Soviet and Pact reductions far larger than those of NATO, they may want to think at some later point in the talks, if the Soviets show serious inclination to move toward NATO position, of trading some part of NATO's technological superiority in this area against large Soviet reductions, while not moving to a zero level.

More specifically, if the Soviets show serious interest in tank and artillery parity, NATO could consider adding to its armor reductions a 25% reduction of NATO fighter-bombers, and reduce Lance follow-on missiles and ATACM conventional warhead missiles to a combined level of 200-300 (neither have yet been deployed in Europe) in return for reduction to parity in Warsaw Pact tanks, artillery, fighter-bombers, and all tactical-range missiles, whether for use with nuclear or conventional warheads. This would mean parity at reduced levels in four weapons systems: tanks, artillery, fighter-bombers and tactical missiles, and possibly also attack helicopters. Actual levels would depend on the design of the Central European reduction area. But, to illustrate, there might be a tank ceiling at about 9,000, an artillery ceiling at about 4,000, a fighter-bomber ceiling of about 750, and a tactical missile ceiling at 200-300, covering missiles equipped with both conventional or nuclear warheads.

Reduced armaments could either be destroyed, as in INF, or placed in storage, this dealing with the problem that withdrawn aircraft can be rapidly returned to Central Europe. Negotiated parity in tactical-range missiles would reduce a large Soviet superiority. This approach also would avoid the expensive competition between the alliances in deploying tactical-range-missiles equipped with conventional warheads which is now in the offing. Largescale deployment by both alliances of such missiles would be highly destablizing because of the high motivation for preemptive use at the outset of a conflict without the inhibitions of using nuclear weapons. The expense for NATO would be compounded by the need to develop and deploy new defenses against these conventional warhead missiles.

This approach is also probably the only practical way either to gain German acceptance for the Lance follow-on or to avoid the total elimination of NATO tactical nuclear weapons from Germany whose prospect causes such concern to some NATO experts. In fact, it would be more logical for NATO to propose parity in all five weapons systems - tanks, artillery, missiles, fighter-bombers and attack helicopters - from the outset, but intra-alliance politics probably exclude this.

The issue of what should be reduced is important. But is should not distract from the issue of the overall design of NATO's reduction approach. Although this agreement could never be implemented because of disagreement over data, in the MBFR talks, the Warsaw Pact participants agreed in principle to parity in military manpower. Since then, Soviet officials have expressed willingness to eliminate asymmetry and informally indicated that they find the general idea of parity acceptable. NATO should keep its negotiating approach focussed on this concept.

Achievement of negotiated parity in various weapons systems would not end NATO's military problems. War can break out between two equal participants. But parity in major armaments would markedly improve NATO's present military position and reduce costs for follow-on systems. If supplemented by agreed restraints on military activities, it would much enhance stability of the remaining confrontation. Parity would also provide a framework for further reductions. NATO troop commanders do not like parity for that reason, having enough forces to cover NATO's Central Front area. But there are many solutions to this highly theoretical problem of further reductions if parity were achieved: we have a very long way to go before Moscow can eliminate NATO standing forces through offering to eliminate its own forces East of the Urals.

A second reduction approach, less asymmetrical, would involve mutual reduction of those specialized types of units-armored reconnaissance units, mobile anti-aircraft units, bridging units, and mineclearing units - without whose support heavy armored forces cannot move forward in attack. These units could be replaced on both sides by less mobile infantry and anti-aircraft units which would functionally replace the reduced units for purposes of defense, but not for attack. NATO and Pact commanders alike claim they need mobile units of this kind for defense as well as offense. But some types of units, like mineclearing units and mobile anti-aircraft, are definitely of greater use to the offensive than the defensive. True, armored reconnaissance units might be replaced by unarmored motorized reconnaissance units or helicopters, but neither would be as effective.

During the new talks, it is probable that each alliance, in criticizing the reduction position of the other alliance, will make use of the criticisms of the existing force posture which have been raised by "alternative defense" thinkers in Germany. These experts criticize the concentration on heavy armored forces by both sides as unstable in crisis situations, creating pressures for preemptive escalation, and providing a dynamic for arms race competition. However, despite Soviet statements on "reasonable sufficiency" in both nuclear and conventional forces, it is unlikely that either side will explicitly commit itself to non-offensive defense as an objective. Such a commitment would imply the obligation from the outset to eliminate or radically reduce the armored formations which are the core of the forces of both sides as they are now organized.

Constraints

Given the probable difficulty of reaching early agreement on reductions, it would be useful for both alliances - and essential for NATO - to accompany its reduction approach in the new negotiations, with a series of non-reduction "constraints"; that is, restrictions on military activities and deployments. Constraints go beyond the confidence-building measures for exchange of various types of information on military activities, like pre-notification of force movements, agreed at the Stockholm Conference which successfully concluded in September 1986. (A new round of negotiations on additional confidence-building measures among the 35 participants in the 1976 Stockholm "Conference on

Disarmament in Europe", who include all members of both alliances, will begin parallel to the new force reduction negotiations. Both conferences will report to the review conference the Helsinki accords which convenes every three years.)

Constraints - an example is the numerical limits on the size of out-of-garrison movements originally proposed by the West in the MBFR talks and by the Soviets in Stockholm - limit the freedom of commanders to dispose of their forces as they might wish. Constraint measures may be the only agreed outcome of the new force reduction negotiations for some time. Military commanders on both sides do not like any limitation on their flexibility of using their forces, but they dislike such restrictions less than reductions. Moreover, if NATO governments are concerned that they may be pressured by their own public opinion into accepting Soviet reduction proposals, they would be well advised to present constraint proposals, which have a chance of acceptance by the Pact and whose agreement would correctly be regarded as progress by Western public opinion.

One possible constraint measure could be to pull back major ammunition and fuel storage depots 100 kilometers or so behind the dividing line between the two Germanies, a measure which would probably have greater impact on Soviet forces than on NATO forces. The further back these depots are located, the harder to sustain forward-moving attack. If the depots cannot be moved by agreement, then they could nonetheless be placed under agreed observation by personnel of the other alliance.

Another measure, if discussion over disposal of reduced tanks - for example, the Western desire to store reduced arms in Federal Germany but to demand that the Soviets take theirs back beyond the Urals - proves too difficult, would be to separate these armaments from their units in the inner Central European zone and to store them under surveillance of the opposing alliance. This measure might be classified as a constraint rather than a reduction, as stored armaments could be repossessed by force - but it would impose an element of delay in preparations for combat.

Another possible measure - properly seen a confidence-building measure, but one uniquely configured for the NATO-Pact confrontation - might include establishment of an air zone along the dividing line between the alliances where surveillance aircraft of both alliances could patrol without interference, including electronic interference.

Next, since NATO and the Pact have agreed in principle in MBFR to have observation groups from the other alliance at major ports, airports, road and rail junctions, this measure should be taken over and applied between the two alliances. Its institution should add to warning and make more difficult preparations for surprise attack.

Among other possible measures would be a prohibition against deployment or storage of chemical weapons in the entire zone, combined with stringent verification. After 1992, US chemical weapons will no longer be stored in the Federal Republic. The USSR claims to have none in Eastern Europe and, consequently, should be willing to agree on a stringent verification regime, especially after it has done so in INF. (An exclusion could be made for France, which produces chemical weapons, but this would not be inequitable in view of the fact that under this measure, both the US and USSR could continue to have production facilities.) A global agreement on chemical weapons would of course be preferable, but there is no founded objection against a piecemeal approach.

One pertinent project of potentially major value is a NATO-Pact risk reduction center to deal with low level incidents between the alliances and to exchange information on agreed confidence-building measures and constraints.

One whole category of constraints, especially those suitable for application to the confrontation of the two alliances in Central Europe, involve pulling back units of a particular type like tank or attack helicopter units from the dividing line between the two alliances, or the proposal for pulling back ammunition depots described above. Measures of this kind have been resisted by some allies, especially Federal Germany, on the grounds that they could mean piecemeal dismantling of NATO's strategy of forward defense and the forward involvement of allies in the defense of Germany. However, many such measures are so sensible and so useful for stabilizing the East-West confrontation that they should be further and seriously discussed in the alliance.

A final word on constraints. Constraints are useful for stabilization purposes, probably easier to negotiate than force reductions, because they are less unpopular than reductions with force commanders in both alliances. And they are an indispensable effect multiplier for force reductions once agreed. But constraints are not a substitute for reductions. They neither reduce force costs nor combat capacity. Most add only a clearer and less ambiguous warning if they are violated and perhaps extend the time of warning by 24-48 hours.

Possible Outcomes

At the outset of this analysis of the prospects for the new Atlantic to the Urals talks, we raised two possible Soviet patterns of behavior, that the Soviet Union might continue the flexible behavior which for the past two years has characterized its position on the INF issue, or that it might follow the unproductive pattern of its behavior in the MBFR talks. In the first case, where the Soviets show flexibility, it is possible that the Soviet Union will move considerably more than halfway toward accepting the Western position.

But what if the Soviet Union, for reasons suggested at the outset of this analysis - sheer size of the reductions proposed by the West, vested interests of the ground forces, and concern over the effects of large Soviet reductions on political stability in Europe - is uncooperative, on the MBFR pattern? In that case, Western governments may find their opposition parties and their public opinion less of a hinderance and more of an asset than is now feared. Most of these groups will recognize it if the Soviets are offering to do little or nothing to build down the confrontation in Europe and will make their views known to the Soviet leadership. The Soviet Union will face loss of the gains it has made in Western European opinion if Soviet behavior in the European force reduction talks is not consistent with its actions in the strategic nuclear talks or with its general posture on East-West relations. There can be progress here, too, although slower.

Viewing the probable Western negotiating position in these new talks from the viewpoint of those who want to see progress in the builddown of the European force confrontation, it is a frustrating one. Yet, given the absence of a clear impetus from top political leaders toward build-down of the confrontation, given the divergences in positions of member countries, and the need to maintain alliance cohesion, NATO officials appear to be doing as well in formulating the NATO position as could be expected. Lacking a clear objective and reacting to Soviet positions rather than attempting to take the lead toward some carefully thought-out long-term goal, NATO may be backing into at least moderate success. As in the INF talks, a demanding Western negotiating position, not adopted because of a serious desire to achieve an outcome, but rather, out of a desire to maintain cohesion and preserve military assets against an uncertain future, may serve as a magnetic pole toward which the Soviet Union is slowly drawn. Indeed, the great debate in the West is likely not to be whether the Soviets are prepared to reduce their forces in Eastern Europe, but whether they are prepared to reduce enough.

Partially for the reason just given, partially because of the extent of Western demands on various aspects of reductions, the prospects are for slow sledding in the new talks, particularly as regards reductions. They will take a long time. Nonetheless, given possible gains and possible losses, we have to do the best we can. If the apparent potential for conventional reductions in Gorbachev's arms control position cannot be realized, then, as seen by Western publics, the responsibility for this negative outcome should rest as clearly as possible on the USSR, not on the timidity or reluctance of Western governments. Otherwise, given prevailing views in Western public opinion, the outcome could have serious consequences for NATO.

The fact is, it is far harder to reduce a confrontation than to build it up and even more difficult to successfully reduce forces while maintaining reasonable defenses against unforeseen contingencies.

Consequently, if we want to move ahead more rapidly to Soviet reductions than is likely in the negotiation forum, we may want to look at the possibility of some informal East-West understandings outside the framework of negotiation - which sometimes has a congealing effect on force levels - in which the Soviets might make sizable force reduction in return for economic benefits from the West, especially interested Western European countries like Federal Germany.

This approach, in which an economic value is traded off against the different realm of security values, has its own difficulties. Yet it points up that arms control, especially arms control negotiations where direct Western leverage is negligible and where both main types of measures - reduction and constraints - have their shortcomings, cannot be expected to do the whole job of gradually building down the confrontation in Europe. The ultimate objective of negotiated measures is to encourage independent actions on both sides to slowly build down a confrontation which was built up by independent actions. In the course of time, it seems likely there will be in fact some slow shrinkage of the European military confrontation on both sides from the combined effects of arms control, confidence building measures, force rationalization, and economic factors.

However, it may avoid misunderstandings if we try to get an idea of the limits of what is possible in the next decades. Even if the Pact numerical superiorities in the confrontation can be chipped away, the level of the confrontation lowered considerably, and the European force concentration made more shock-resistant through agreed constraints, the remaining East-West confrontation is likely to be substantial and durable. It is difficult to conceive of a practical situation where the two alliances do not continue. The clash and competition of the

Western and the Pact social systems will certainly continue. But it should be the general objective of Western policy to reduce the military component of that competition as far as possible- to move toward demilitarizing the competition.

There are both dangers and opportunities in the openings created by the emergence of a reform-minded Soviet leadership, but more opportunities than dangers - and more opportunities than NATO now appears ready to exploit.

Senator WIRTH. Thank you very much, Ambassador Dean. Mr. Karber.

STATEMENT OF PHILLIP A. KARBER, VICE PRESIDENT AND GENERAL MANAGER FOR NATIONAL SECURITY PROGRAMS AT THE BDM CORP.

Mr. KARBER. I have also prepared a handout for reference. And rather than go through and read it, what I will try to do is just very quickly summarize it, Senator, so we can go into the question and answer, which I think will be a lot more interesting.

In asking what is interesting or why all the interest in the new stabilization talks, it seems to me that there are three aspects that are coming together that really offer those talks to be something new or different, or with more potential than the old MBFR talks, which as the Ambassador said were not very successful.

The first is that the focus itself is on stability, which is in many ways hard to define. But the focus there is on trying to reduce the inherently offensive forward structures that give one side or the other an preemptive capability.

So one does not have to pursue a mystical, exact parity or a total reduction, but rather try and reduce each side's concern over the threat of offensive surprise attack. And I think that focus is useful, because it is clearly what has concerned the West in its own conventional defenses.

And in terms of our own resource allocation, one of the major ways in which we consume our Western defense dollars is paying for a high level of readiness to try and preclude that potential option. So any arms control focus on that, I think, is useful.

Second is geography. One of the big complaints of MBFR was it was focused strictly on Central Europe. And that thus the Soviets, any reductions they had could go right across the border, any reductions on our side would, particularly Americans, would go off the continent. They could bring their forces back earlier than we could.

So one of the real advantages of looking at the new geographic framework of the Atlantic to the Urals was to be able to try and get a handle on that reinforcing area within the Soviet Union, from not only what is called the NGA, the NATO guidelines area, or euphemism for Central Europe, but also the Soviet western military districts and their central strategic reserve in the center of the U.S.S.R.

Now, that geographic choice is both good and bad news. It has both opportunities and dangers. The opportunity is that if we take an aggressive position in terms of getting reductions out of Central Europe, that is reducing the standing, offensive, forward-deployed Soviet forces, it offers us the mechanism of having a control device of where they go, and verifying them in ways that MBFR did not.

On the other hand, if we do not focus carefully what it is we want the Soviets to do, that expanded geographic area poses several dangers.

One, for example, is a merely counting all the assets of NATO on the Western side, including Spain and Portugal, for example, with those on the Warsaw Pact side, particularly Soviet forces which could be concentrated into the theater or region of their choosing.

By taking such aggregate totals, we tend to wash out the major conventional imbalances, but also the dangers that those imbalances have for stability.

Second, there are significant asymmetries across the NATO front. For example, in Northern Europe, NATO forces in Norway and Denmark are characterized by the lack of readiness. Essentially those countries have to fully mobilize before they have the ability to fight.

Where in Southern Europe, for example, we have large standing armies operating with essentially World War II equipment. They are technologically obsolescent and have minimal sustaining power. So there is a big difference.

In the center we have got active, modern, ready forces which have both some maldeployment problems and some sustainability.

So because our own alliance has this wide variance from north to south, any geographic counting area that suddenly lumps in Turkish manpower, for example, in a trade with Soviet manpower may have all the symbolic effect of peace in our time, but actually effectively do nothing to enhance stability in the other region.

And clearly, when Gorbachev raised the issue in his example of some initial reductions of 100,000 or so, he was speaking in that wide framework of the Atlantic to the Urals.

That is a very dangerous area. It is compounded if we lose sight of what it is we want withdrawn. Not only in terms of the region, but also in terms of the assets.

If we allow it to become manpower, our ability to verify it is virtually nil, and has virtually no effect on the military balance. So the expanded geographic scope has both promise, but as I said, dangers.

Third, I think there has been, as the Ambassador suggested, an at least significant change in what the Soviets are saying about conventional arms control.

After all, it was 2 years ago that this issue really became heightened, and the people who heightened it or raised it were not us, the ones who one would think would have the natural incentive to raise the issue of conventional arms control, but the Soviets, the ones who ostensibly gain all these benefits from having a large, standing conventional force.

It is the Soviets that have been pushing this issue. It is the West, facing the imbalance, asking its publics to spend more for defense, has been unable to articulate even what it is we would like the Soviets to do if they were willing to do it.

So I think there is a potential for Soviet pressure, just because, unlike MBFR, they seem to have a real interest in this issue. As Secretary Thomas said earlier, that may be purely for political or propaganda reasons. But we will not know that until we take them to task with a hard proposal of our own.

Now, I have included in some of the backup material, and I would be glad in the questions to go into some of the reasons why the Soviets may, in fact, have some incentives to do it. But I prefer to skip that right now.

Now, if one then asks, well, Phil, where are you coming down on this? My argument is, MBFR, much maligned as it was, had the right geographic area. The most unstable, dangerous place on the Earth for the conventional forces is in Central Europe.

That is where the conventional capabilities of the two superpowers are face to face. It is where there has been a substantial arms race, one which the West is not winning. It is an area where there are preemptive incentives to the side that hits first, that he may be able to have significant military gains very rapidly.

It is a highly dangerous area. That is where we should focus. And the assets that are dangerous there are not the total Warsaw Pact, but basically the unnatural position of Soviet forces forward-deployed.

About the only thing in Ambassador Dean's comments that I would disagree with was where he said, the problem was not stability, but the function of wasting a lot of resources. I would illustrate just one example.

I have it in the handout. But this little map shows the peacetime tank deployments of NATO and Warsaw Pact forces. Now, I have given this as a political Rorschach for everybody from Tyson's Corner to European Ministries of Defense, and I have not found anybody yet who can look at that map and see, knowing where the Eastern bloc is, and say that that mass of Soviet army, 90 percent of all these little dots in East Germany are Soviets, that that mass of Soviet army looks inherently stable or balanced.

Now, you will notice that NATO has a lot of tank battalions to, but they are not up in their forward defense positions. To take advantage of the inherent advantages, and I think there are some of a traditional conventional defense, requires the West to take time to redeploy its own forces.

Whatever time that is in mobilization gives the other side a preemptive window to launch an attack, to go against our defenses before they are deployed and before they are ready.

I do not call that a stable balance. Any time one side has an incentive to launch a preemptive military action to me is not a stable balance. It seems to me that is the key fundamental problem.

That is the problem that is driving Western, particularly U.S. defense budgets, up the wall, trying to deal with. But it is also a much more manageable problem. We are not asking the Soviets to disband hundreds of divisions. What we are asking them to do is reduce an unnatural location or density of armor.

Now, toward the end of my comments I make the argument that I think, despite the disarray in the Western alliance, inability to even articulate what it is we want, there is actually more agreement than appears on the surface.

I just returned fron Bonn, Paris, Brussels, and London, and having surveyed the various Western, U.S. positions as well. And the one thing that virtually all of those analyses include, or are in agreement, is an agreement of what it is we want the Soviets to do.

And the most typical number you will see is roughly 13 of the 26 Soviet forward divisions in Central Europe, that is roughly 50 percent, ought to be withdrawn from Central Europe.

That would still leave the Soviets and the Warsaw Pact with more conventional assets in Central Europe than NATO. But it would effectively reduce their offensive capability.

Now, what is interesting is the place where the Western allies tend to disagree, in fact the sole reason why I believe Secretary Thomas was not able to give you an answer to the question, what is our position, this morning, is that what we disagree is on what it is we trade in return.

Now it seems to me that there is a mistake there in waiting till we come to agreement. First, I am not sure we ever will. But second, it seems to me that that is what negotiations are for.

That is, what we ought to do is approach the Eastern bloc, with relish, with a strategic plan, and explain to them what it is that bothers us. And interestingly, we agree on that.

Then let us hear from them what it is they want us to do about it. That is then the time to get into the interesting intra-alliance, intra-bureaucratic debates on what is acceptable. Not before an agreement.

If we focus on trying to come up with a "proposal" that not only says what we want them to do but also tells them how much it is we are going to pay for this that they do, we not only give away our own bargaining position but effectively preclude ever coming up with an effective proposal.

With that nonprovocative conclusion, I will quite and wait for questions.

[The prepared statement of Mr. Karber follows:]

Opening Comments on Coventional Arms Control

Phillip A. Karber
the BDM Corporation

> **Gorbachev makes these grandstand proposals which get front page headlines all over the world and a year later NATO's 'bold' response is so bland it couldn't get buried on the obituary page.**
>
> B.F. Schemmer *Armed Forces Journal*, May 1987

With the impending start of the new military stabilization talks the challenge of conventional arms control in Europe has finally emerged as both a serious and urgent issue. Although it is hardly new, conventional arms control is a "hot" topic of growing importance, one which could greatly influence American budgetary, military and diplomatic options throughout the next decade. A challenge which will hopefully not be relegated once again to the bureaucratic back burner -- allowed to "cool off" because the first string of policy makers have lost interest.

Conventional arms control is a **serious** issue because:

- For nearly four decades the Western alliance, faced with what was perceived as a significant inferiority in conventional military capability, has relied on a nuclear deterrent -- the credibility and and capability of which is undergoing radical change.

- The posture of both NATO and Warsaw Pact conventional forces deployed in Central Europe has changed significantly over the last several decades -- with the combined effect of current trends in emerging weapons technology, new operational concepts and changing structures not conducive to a stable military balance.

- Unlike previous Western approaches to conventional arms control which have alternated between the political lows of "cold war" propaganda and the psychological highs of diplomatic detente, the current emphasis is on achieving militarily significant stabilizing reductions -- but the nature of modern combined arms combat and the relative capability of opposing forces is extremely complex, necessitating an understanding of conventional arms in order to achieve meaningful conventional arms control.

Conventional arms control is an **urgent** issue because:

- Given the imminent arrival of an INF agreement, it is critical that the West maintain and apply the same arms control momentum toward solving the root cause of dependance upon theater nuclear forces -- which is the conventional imbalance.

- NATO's conventional defenses and the INF deterrent forces have been traditionally linked (both in history and current NATO strategy) and it would be a foreign policy blunder of the first magnitude not to actively engage the Soviets in negotiations on stabilizing the European conventional balance while they have the strongest incentive -- the West needs a coherent and compelling conventional arms control plan and proposal:

    - before the signing of INF at a superpower summit;
    - before Senate ratification hearings on a treaty;
    - before implementation of missile withdrawals.

- The US and our Western allies are already long overdue in responding to both the Soviets and their own mandate with a plan and proposal for militarily significant conventional arms control stabilizing measures. It has been nearly two years since Gorbachev's surprising expression of interest in conventional reductions. It has been over a year since NATO called for "bold new initiatives." The response has been deafening in its silence.

In the spring of 1986 as it was becoming evident that MBFR was headed for the scrap yard, Senator Sam Nunn argued before NATO in Brussels that the West could not afford another round of fruitless negotiations and that before proceeding with any new format for future negotiations, the alliance needed a **"conceptual military framework for conventional arms control."** Having reviewed a similarly titled planning document prepared by SACEUR, the Senator argued that a variant of this methodology should be used by NATO in addressing conventional arms control with the following elements:

and weaknesses of Warsaw Pact conventional capabilities as compared to those of NATO;

- Focusing arms control to take on the ambitious task of asking "what we would want the Soviets to do to improve the stability of the Central Region military balance -- if we could get them to do it?"
- Asking the alliance to creatively develop conventional arms control options which addressed militarily significant imbalances -- options which were capable of being understood by Western publics.

To date, neither the Western Alliance nor even the US Government, has produced a "**conceptual military framework for conventional arms control (CMF/CAC)**." The absence of a statement of what we would want out of the negotiations or a plan of how to get it is clearly illustrated in the current disarray within and between Western governments -- where more time and effort is being wasted in intra-allied debate and personality disputes than in coming to grips with the seriousness and urgency of the issue.

No one outside the executive branch of government has the military knowledge, methodological tools, or sensitive policy perspective sufficient to produce a CMF/CAC. However, until such a document is produced the following points seem worthy of mention:

- There are both advantages and disadvantages to the expanded geographic scope of the Atlantic to the Urals. We need to focus on where the real problem is -- in Central Europe.
  Fig. 1 Geographic Counting Rules
  Fig. 2 Division Deployment
- We do not know what, if any, serious interest the Soviets have in conventional reductions.
  - Their biggest interest is in denuclearizing NATO.
  - They may have domestic incentives to reduce the size of their active force.
    Fig. 3 Soviet Annual Draft Cohort
  - The only way to test their seriousness is to offer and negotiate serious Western positions.

- The greatest threat to stability is the high concentration of Soviet forces deployed forward in Central Europe -- a force which gives them potential preemptive options -- options which the Soviets have intentionally been creating.

Fig. 4	Armor/Anti-armor Trends
Fig. 5	Comparative Modernization
Fig. 6	Tank Deployment Map
Fig. 7	Soviet Emphasis on Preemptive Maneuver
Fig. 8	Artillery/Fire Support Trends
Fig. 9	Comparative Modernization
Fig. 10	SSM deployment Map
Fig. 11	Soviet Emphasis on "Fire Strike"
Fig. 12	Air/Air Defense Trends
Fig. 13	Comparative Modernization
Fig. 14	Air Base Map
Fig. 15	Soviet Emphasis on "Air Offensive"

- There is much closer Agreement within the West on "What we want from the Soviets" than is commonly realized.
    - The most destabilizing element of Soviet "forward offensive" -- high concentration of Soviet armor in East Germany.
    - Soviet ground forces in Central Europe should be cut by:
        - 50%
        - 13 to 15 tank divisions
    - Reductions in equivalent NATO forces could only be 1/5 of the size.

- Major Western disagreement is on what the West could and should trade the Soviets.
    - Our allies differ among themselves as much as they differ with the US.
    - Best articulated proposal to date is that of Sen. Nunn.

Fig. 16	**Map of Nunn targeted divisions**
Fig. 17	**Nunn - Soviet/US assets withdrawn**
Fig. 18	**Map of Nunn redeployed divisions**

Fig. 1

ATLANTIC TO THE URALS

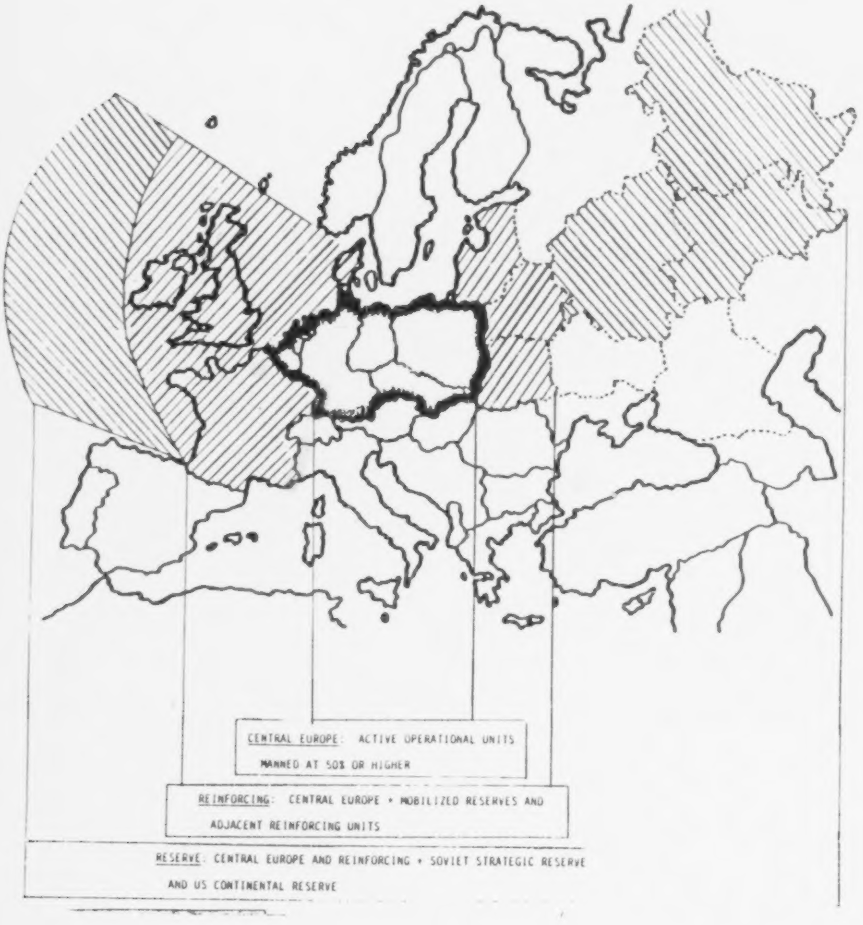

CENTRAL EUROPE: ACTIVE OPERATIONAL UNITS MANNED AT 50% OR HIGHER
REINFORCING: CENTRAL EUROPE + MOBILIZED RESERVES AND ADJACENT REINFORCING UNITS
RESERVE: CENTRAL EUROPE AND REINFORCING + SOVIET STRATEGIC RESERVE AND US CONTINENTAL RESERVE

Fig. 2

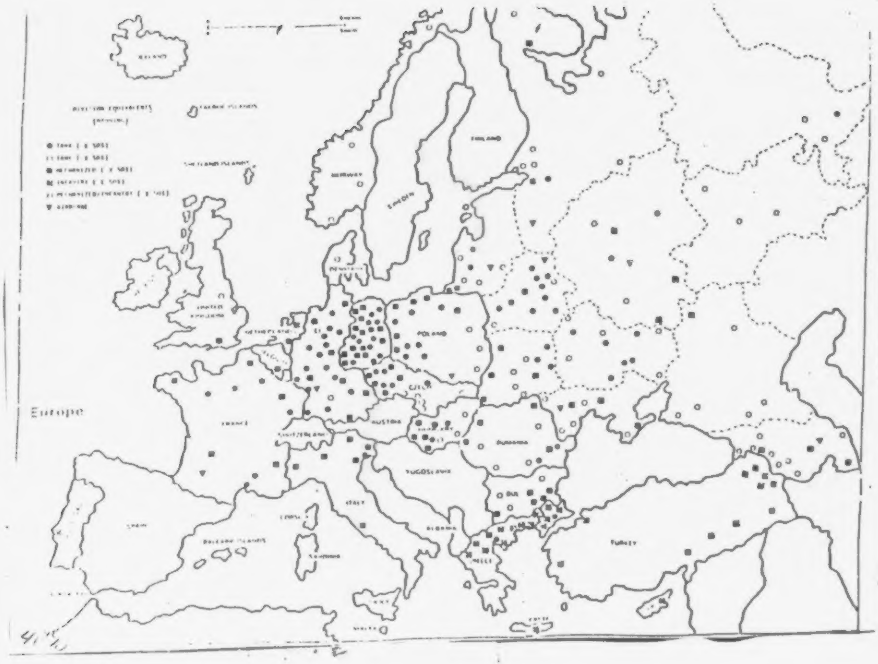

Europe
ICELAND
FAEROE ISLANDS
SHETLAND ISLANDS
NORWAY
SWEDEN
FINLAND
DENMARK
UNITED KINGDOM
NETHERLANDS
POLAND
CZECH
AUSTRIA
SWITZERLAND
FRANCE
SPAIN
BALEARIC ISLANDS
CORSICA
SARDINIA
ITALY
SICILY
YUGOSLAVIA
ALBANIA
GREECE
RUMANIA
BUL
TURKEY
CRETE

Fig. 3

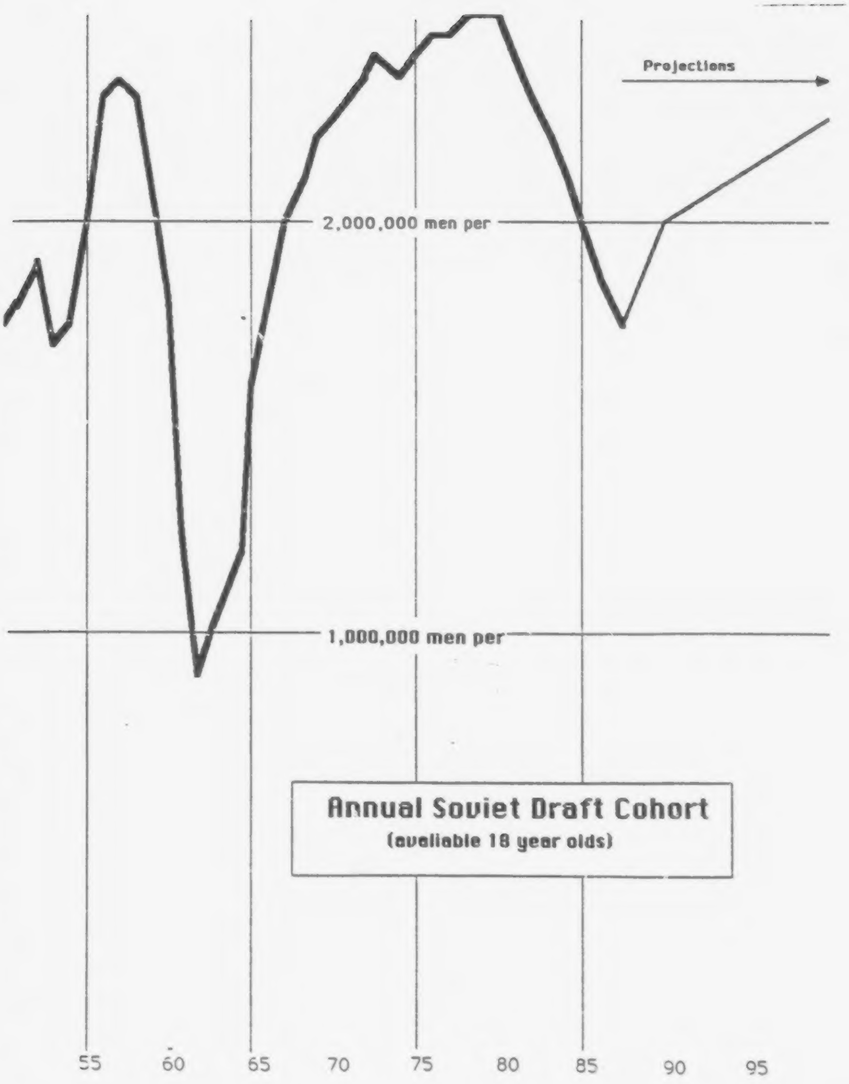

Projections
2,000,000 men per
1,000,000 men per
Annual Soviet Draft Cohort
(avaliable 18 year olds)
55
60
65
70
75
80
85
90
95

Fig. 4

CENTRAL REGION BALANCE TRENDS
(IN THOUSANDS)

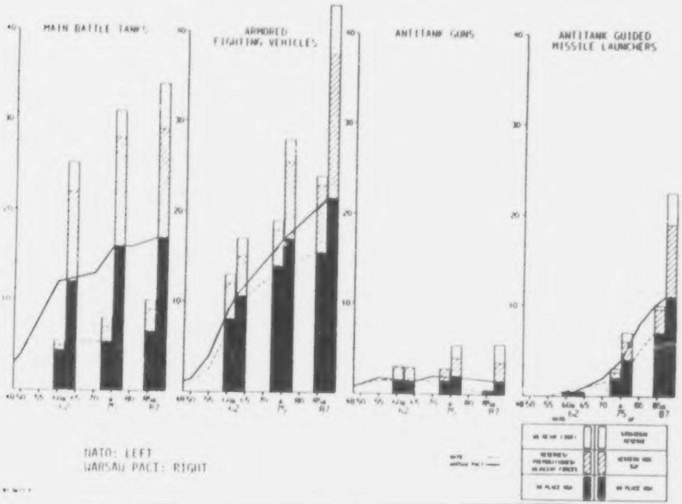


Fig. 5

TECHNOLOGICAL MODERNIZATION
MAIN BATTLE TANKS

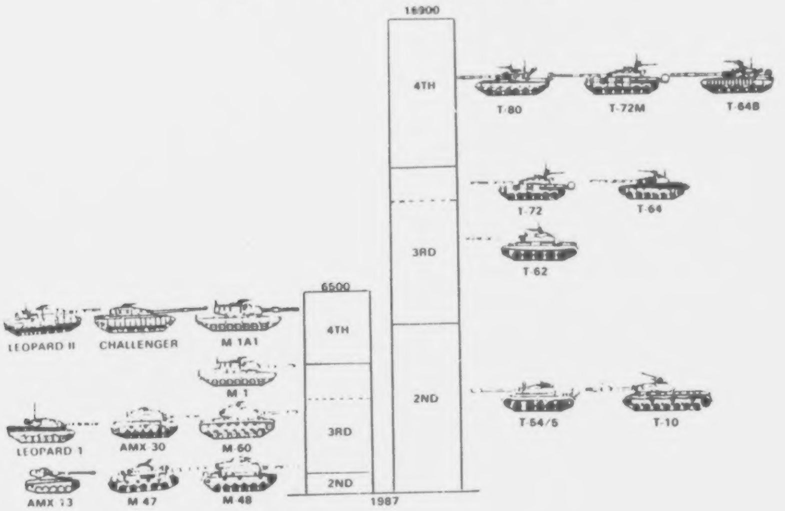


Fig. 6

TANK IMBALANCE IN CENTRAL EUROPE

BATTALION PEACETIME DEPLOYMENT

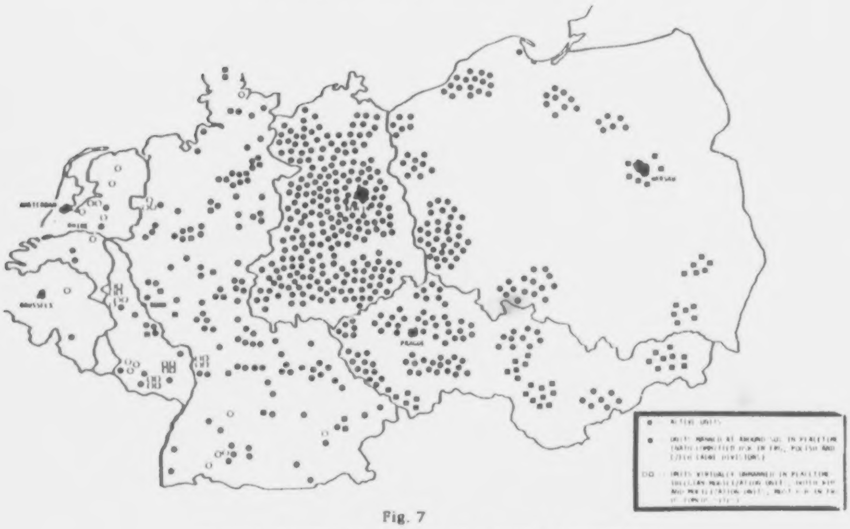


Fig. 7

NEW EMPHASIS ON PRE-EMPTIVE MANEUVER

CLASSIC BREAKTHROUGH

- EXTENDED MOBILIZATION AND REINFORCEMENT
- MASS FOR ATTACK
- LINEAR DEFENSE
- CONCENTRATED FIREPOWER

OPERATIONAL MANEUVER GROUPS

- SURPRISE SUBSTITUTED FOR MASS
- GRANULAR DEFENSE
- MEETING ENGAGEMENT
- MANEUVER ON MULTIPLE AXES

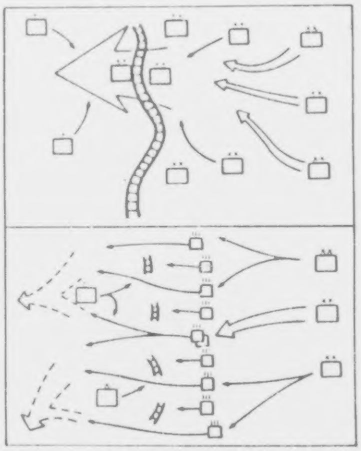


Fig. 8

CENTRAL REGION BALANCE TRENDS
(IN THOUSANDS)

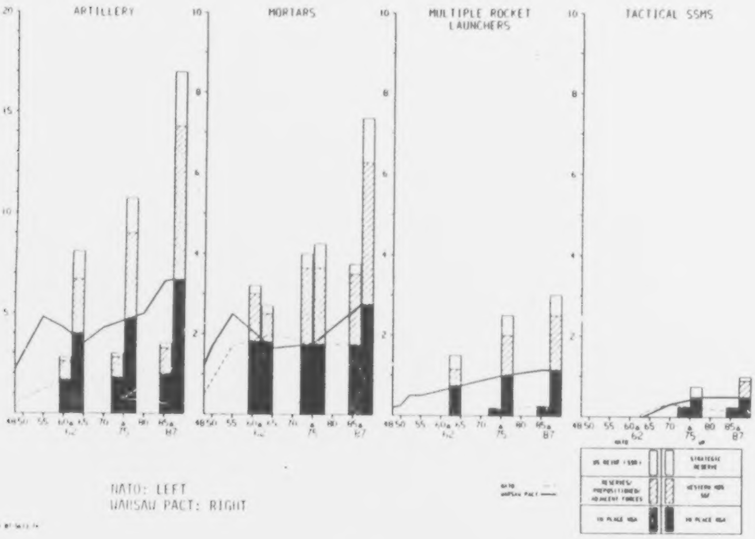


Fig. 9

TECHNOLOGICAL MODERNIZATION
ARTILLERY

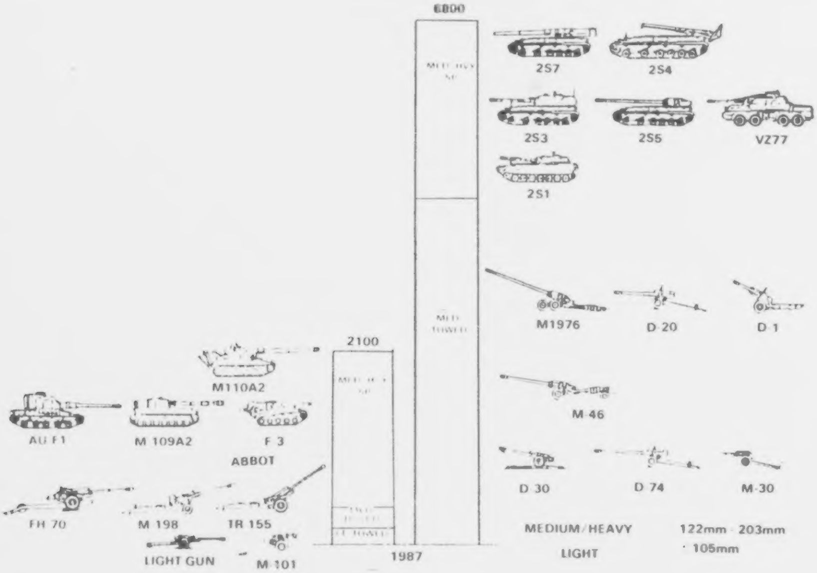


Fig. 10

DEPLOYMENT LOCATIONS OF SURFACE-TO-SURFACE MISSILES

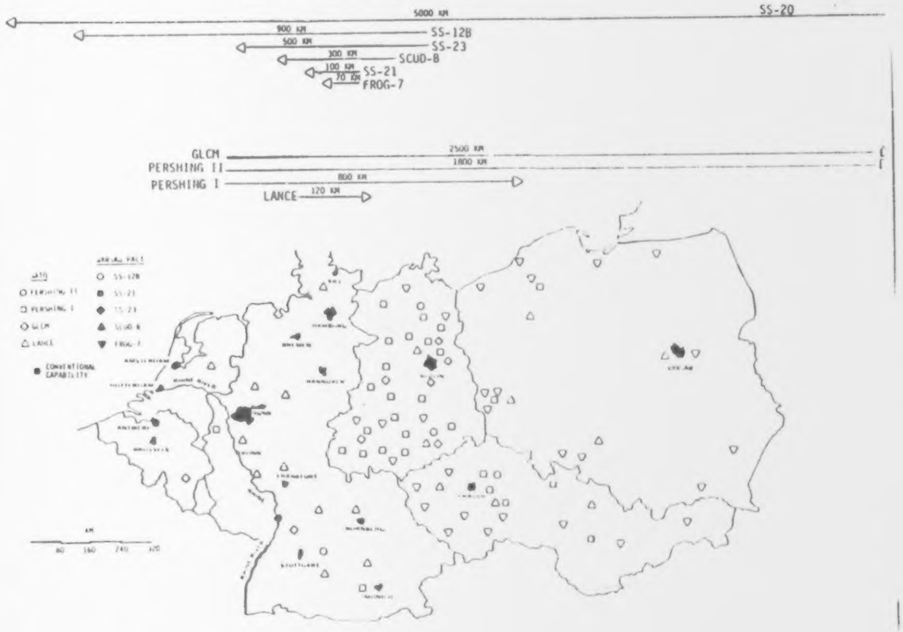

5000 KM
SS-20
900 KM
SS-12B
500 KM
SS-23
300 KM
SCUD-B
100 KM
SS-21
70 KM
FROG-7
GLCM
2500 KM
PERSHING II
1800 KM
PERSHING I
800 KM
LANCE
120 KM

Fig. 11

INCREASED SOVIET EMPHASIS ON CONVENTIONAL ARTILLERY

TRADITIONAL VIEW

- [illegible]
- MANEUVER UNITS MUST WAIT FOR TOWED ARTILLERY TO CATCH UP
- VULNERABLE TO COUNTERBATTERY AND NATO NUCLEAR ARTILLERY
- DEPEND ON LOW ACCURACY [illegible] FOR NUCLEAR TARGETS

THE STRIKE CONCEPT

- COMBINED ARMS INTEGRATION OF NEW SELF PROPELLED SYSTEMS AT LEVEL OF MANEUVER UNITS
- "CONCENTRATE FIRES NOT FORCES"
  - SHORT HIGH INTENSITY FIRE CONTROL OF DISPERSED ASSETS
- "RECONNAISSANCE STRIKE COMPLEX"
  - DEEP STRIKES TO SUPPRESS SEMI FIXED TARGETS
- [illegible] NUCLEAR ARTILLERY AND "NEW PHYSICS" WARHEADS

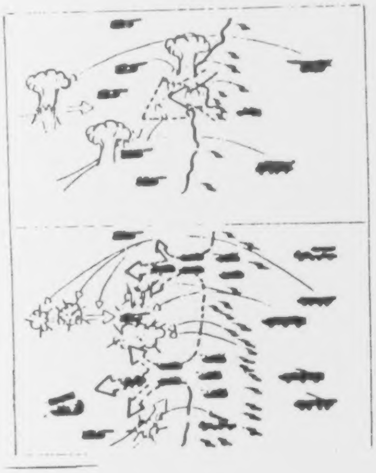


Fig. 12

CENTRAL REGION BALANCE TRENDS
(IN THOUSANDS)

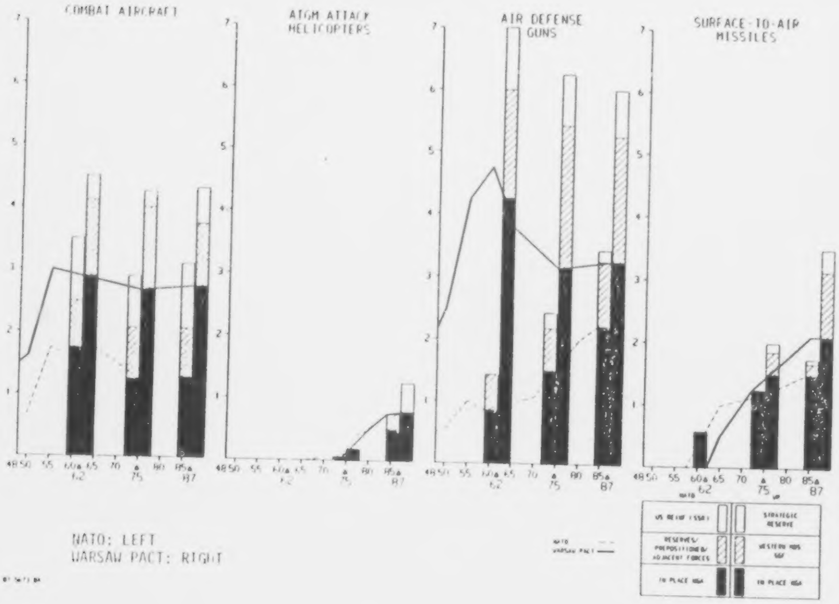


Fig. 13

TECHNOLOGICAL MODERNIZATION
COMBAT AIRCRAFT

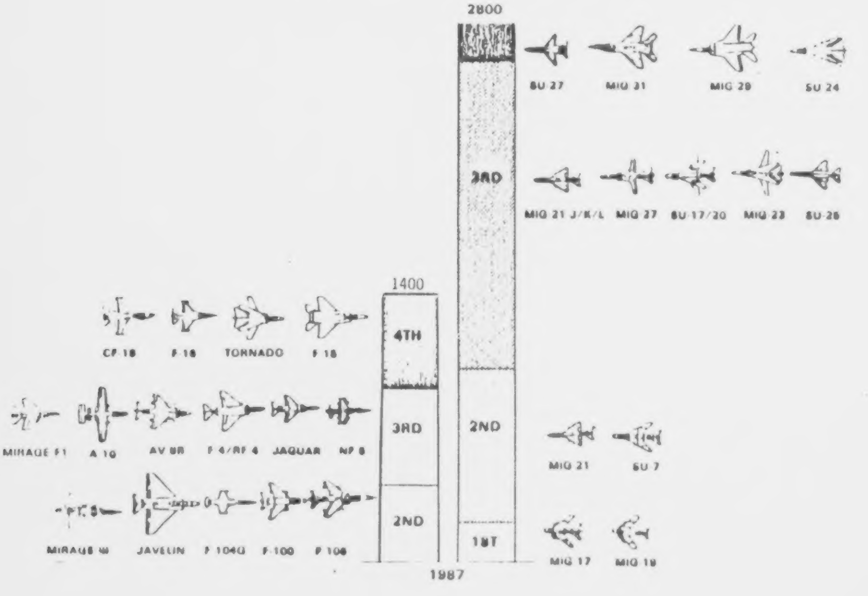


Fig. 14

CENTRAL REGION AIRBASES & SAM COVERAGE

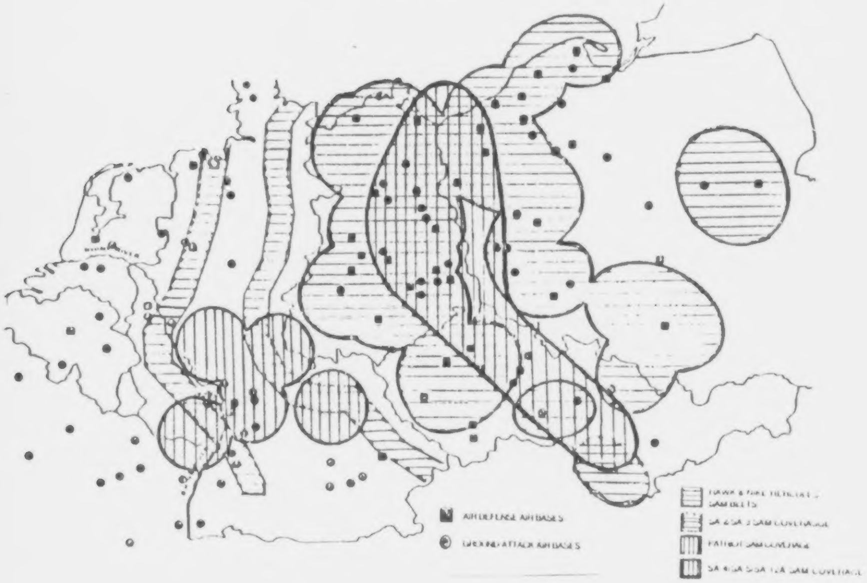
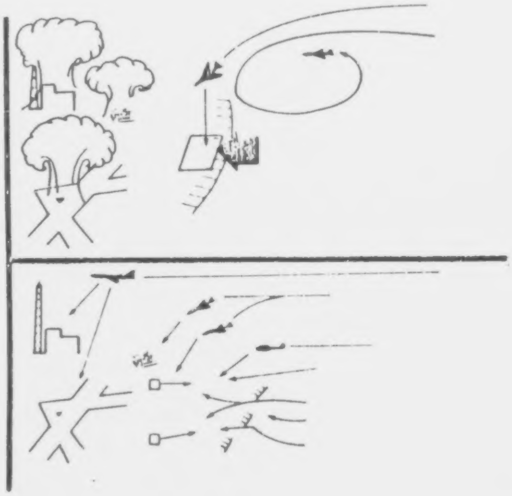

AIR DEFENSE AIRBASES
GROUND ATTACK AIRBASES
HAWK & NIKE HERCULES SAM BELTS
SA-2/SA-3 SAM COVERAGE
PATRIOT SAM COVERAGE
SA-4/SA-5/SA-12A SAM COVERAGE

Fig. 15

NEW EMPHASIS ON UNREINFORCED AIR OPERATIONS CONCEPT



"AERIAL ARTILLERY"

- NUCLEAR WEAPONS FOR DEEP TARGETS
- AIR DEFENSE OF MASSED BREAKTHROUGH AND REAR AREA
- SUPPRESSION OF EXTENDED BREAKTHROUGH ZONE

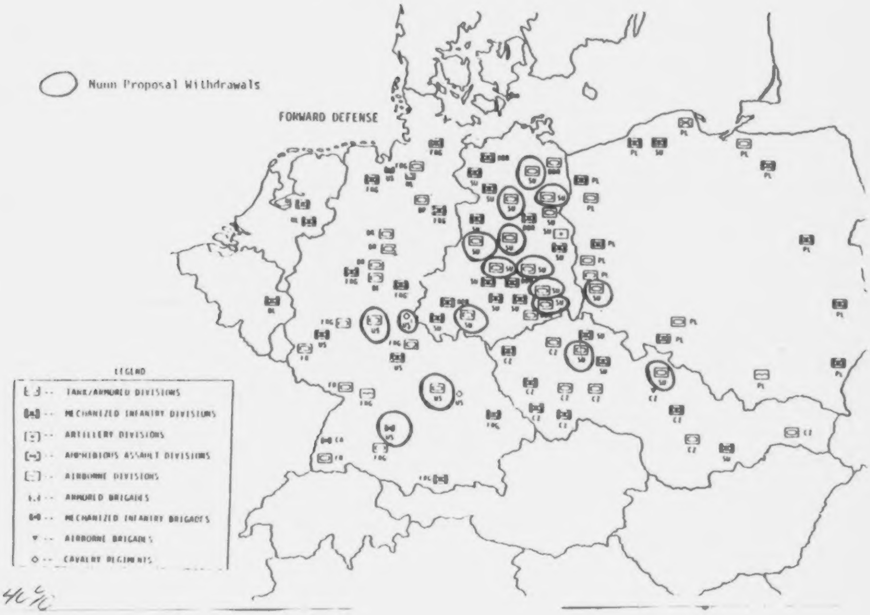
"AIR OPERATION CONCEPT"

- SUDDEN CONVENTIONAL ATTACK
- BOMBERS
  - C^3, HQ
  - AIR BASE DISRUPTION
  - NUCLEAR DELIVERY AND SASP
- FRONTAL AVIATION
  - AIR DEFENSE CORRIDORS, C^3, EW
  - DISRUPTION OF UNITS IN MOVEMENT
  - POMCUS/KASSERNS
- ASSAULT HELICOPTER SUPPORT OF LEAD REGIMENTS

Fig. 16

MAP "A"

CENTRAL EUROPEAN MILITARY BALANCE


Nunn Proposal Withdrawals
FORWARD DEFENSE
LEGEND
TANK/ARMORED DIVISIONS
MECHANIZED INFANTRY DIVISIONS
ARTILLERY DIVISIONS
AMPHIBIOUS ASSAULT DIVISIONS
AIRBORNE DIVISIONS
ARMORED BRIGADES
MECHANIZED INFANTRY BRIGADES
AIRBORNE BRIGADES
CAVALRY REGIMENTS
US
FRG
SU
GDR
PL
CZ
UK
BE
NE
FR
CA

40%

Fig. 17

NUNN PROPOSAL

FIFTY PER CENT REDUCTION OF U.S. AND SOVIET DIVISIONAL ASSETS IN CENTRAL EUROPE

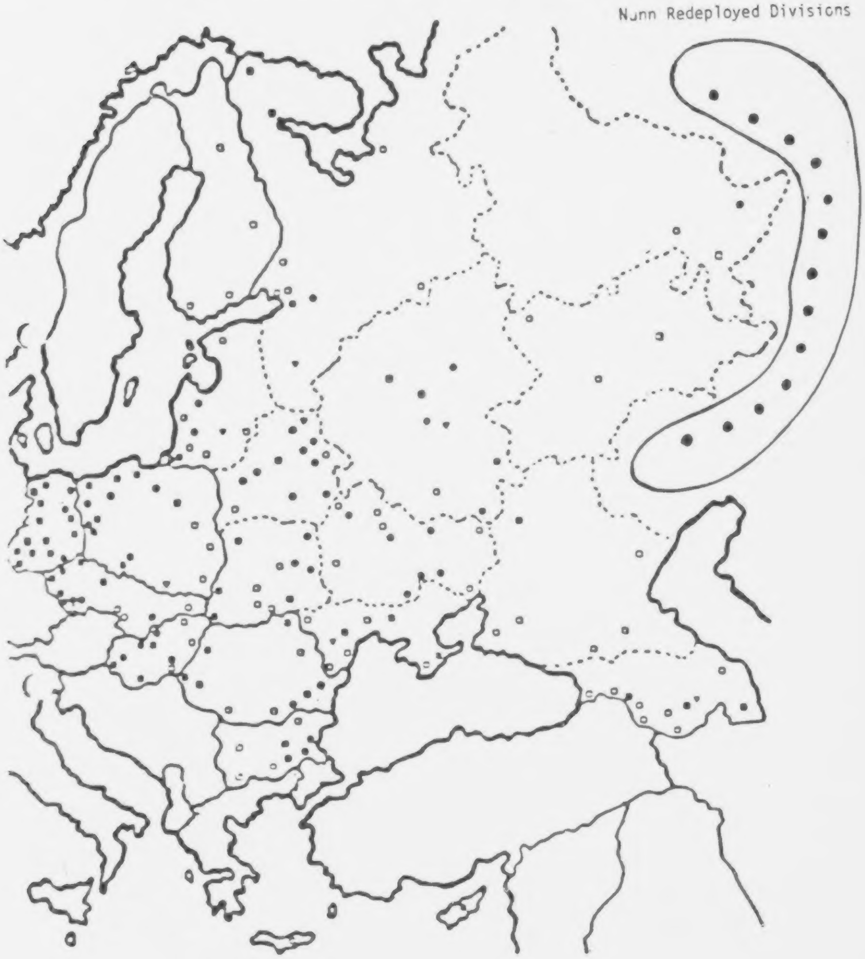
U.S Assets Withdrawn	Soviet Assets Withdrawn
2 arm.div./1 mech bde/1 cav.reg.	13 tank divisions

	US ASSETS WITHDRAWN	US % OF NATO ACTIVE	RATIO OF WITHDRAWAL	SOVIET % OF WTO	SOVIET ASSETS WITHDRAWN
Troops	42.600	5.3%	3.4:1	13%	149,[illegible]
Tanks	949	13.7%	4.4:1	24.5%	4147
AFV	1178	16.5%	3.7:1	22%	4355
ATGM	1038	16.7%	3.1:1	29%	3237
ARTY	204	9.7%	8:1	24%	1638
MRL	18	8%	13:1	19.5%	234
MORTARS	177	10.4%	5.2:1	13%	936
AD gun	45	2%	5:1	9.7%	208
SAM	48	3.4%	9:1	21%	465

Fig. 18

MAP "C"

SOVIET REINFORCING DIVISIONS


Nunn Redeployed Divisions

Senator **Wirth**. Ambassador Dean, is there any comment you would like to make in response to Mr. Karber?

Ambassador **Dean**. Well, I think that people now realize that the Central European area is the main area for focusing on for reductions. And they do tend to go toward tank and armored force reductions.

I would disagree with Mr. Karber somewhat about whether there is great or less stability in the area. But that is a technical issue. The problem that we are facing now is that there is growing agreement on the side of NATO on what they want to reduce on the Soviet side, that is Soviet armor, but there is still, as Mr. Karber pointed out, no agreement on the side of NATO as to what NATO might be willing to reduce in return.

I tend to agree with him that it would be desirable to have exploratory talks at the beginning, where you could have some discussion of these doctrinal issues, but more focused on the actual force postures of both alliances, and combined with an exchange of data and information on both sides before the specific reduction positions are put down. Once reduction proposals are presented by both sides, they all will get cast into concrete, and armies of diplomates will have to spend years chipping away at the positions of both sides, unless some political leader brings them together. So I think it is wise to have an exploratory phase before both alliances decide on their reduction propositions.

But, basically, NATO has already ruled out all of the items in which the Pact has expressed any interest, that is, the shorter range nuclears, and aircraft, while each day augmenting and increasing what it thinks it should ask from the Pact.

The problem is going to be that when the NATO position becomes public, and demonstrates a good deal of lack of realism, public opinion in this country and in Western Europe may not consider the NATO position serious. The Soviets, too, who are calling on to carry out these in all circumstances lopsided Eastern reductions, both Warsaw Treaty reductions and their own reductions, are not going to be convinced that they are facing countries that really want to have a serious negotiation.

Senator **Wirth**. So are you suggesting that unless we are willing to, as the NATO alliance, put more on the table, there is no reason to expect that the Soviets are going to come to us?

Ambassador **Dean**. Yes, I do not argue that this has to be done at the outset. But we are after all systematically now engaged in internal NATO discussions, and discussions with the Pact in Vienna, some in Moscow, in which we are telling them what we are not going to negotiate about, Pact officials are pressing that tactical nuclear weapons should be included in the negotiation. But we have told them, as Mr. Thomas again told you gentlemen today, that we are not going to include them. Apparently, agreement among the NATO countries has also been reached to hold back on the reduction of fighter bombers, one area where there is a technological Western advantage that could be traded off for such bigger Pact reductions.

And I fear that the NATO position is going to look both to the Soviets and to Western opinion in substance like a suggestion for unilateral Soviet reductions. Once again, serious weakness in the

Western position is the absence of a long-term goal, of a longer-term goal of building down the East-West military confrontation as feasible. I think that the East-West confrontation in Europe has reached its peak, and is on the downgrade politically. But the military confrontation is continuing unabated. It has developed a kind of autonomy. We should be using this Soviet reform-minded leadership, which may ultimately run into trouble and that is the prevalent opinion of most experts, in 3 or 4 or 5 years we should be using its willingness to reach understandings in arms control through a more far reaching objective of our own.

Senator WIRTH. How significant were the discussions and the agreements that came out of the last round CSCE in Copenhagen? Was it not Copenhagen?

Ambassador DEAN. In Stockholm.

Senator WIRTH. Stockholm.

Ambassador DEAN. Right.

Senator WIRTH. How significant were those agreements?

Ambassador DEAN. Well, as the beginning of any important continuing process, they were important, because they did include the provision for three on-site inspections of Soviet territory per year. The United States has already carried out one such inspection, with good results and good cooperation with the Soviet Union. The measures agreed at Stockholm do present a better picture of normal activity, normal force activity, and training which has to be prenotified. With consequent better warning when these normal procedures are changed, the measures agreed have weaknesses in that they do not cover alert exercises. Simply by declaring an alert, you can avoid all of the requirements for notification, although after a limited period then you do have to invite observers. But you could concentrate forces for attack in that time. That is one of the loopholes that has to be tightened up. But with one minor exception, the Stockholm agreement did not restrict the flexibility of force commanders in using their forces in any way. Such agreed restrictions are often called constraints. Suggestions that the size of out-of-garrison activity be limited, something that NATO itself proposed in the MBFR talks 10 years ago and made by the Pact at the Stockholm talks, were not accepted. So all we have really is an information exchange with a capacity for some limited inspections. There has also been inspection of Soviet troops, for example, in East Germany, carried out by the U.K. under this agreement.

This is useful, but only a beginning. But the process will be continued. The problem of the future negotiation, the continuation of Stockholm, is that it seems to have run out of steam in terms of content. We should be looking around for some ideas, not only within governments but outside them, to people like Phil Karber and others who are interested, to try to canvass them and get some suggestions.

They need gas badly for a CDE phase two. And they need it also for these new force stabilization talks—I call them force reduction negotiations, because reductions on both sides will be an essential part of a successful negotiation.

Constraints on force activities multiplies the effects of force reductions. Constraints by themselves are not a substitute for reductions. They do not reduce costs, and they leave combat effectiveness untouched—and with it the possibility of devastating conflict. But they are very important ways of assuring predictability in military behavior and making clear when there are differences, departures from that predictable pattern.

Senator WIRTH. I gather from what both of you are saying is that you are assuming that over the next year we will wait for 3 or 4 months for CSCE to come to a conclusion in Vienna before getting into more formal discussions within that framework, I guess is the terminology.

So we have until springtime before more significant discussions really begin. Then between then and early 1989, neither of you is assuming that very much is going to happen.

We have an administration that is a lame duck. We have sort of a lack of cohesion of goals in NATO. And we are going to be in pretty much of a dormant position on the assumption that the Soviets may come to us. But we are going to be feeling them out, coming to know each other during 1988.

That may present us with an opportunity during 1988 to put together what our goals are as an alliance, and to better articulate what we are willing to put on the table through the ideas that Mr. Karber gives to us, and that you give to us, and others.

We have this opportunity over the next year, to put together a set of goals and a better understanding politically in this country about the importance of these negotiations.

Is that a fair statement about all that is going to happen in 1988? We are not going to get much beyond that?

Ambassador DEAN. My hope is, as you have expressed it, that new ideas will be generated. Very little will happen during this next year. It may be that the CSCE review does culminate by the end of this year, with an agreed mandate. But the talks will not get underway until March, April, May, even under those conditions. And possibly later. This will be in the last months of this administration. And I think this issue will be in practical terms be something that the next administration will want to look into carefully. And it is my hope that a more coherent and more long-range and less defensive NATO posture can then be developed.

Mr. KARBER. Senator Wirth, if I could comment there. I think you have given a fairly reasonable description of what is likely to happen.

I would demure in the sense that that is what ought to happen. In fact, if that happens, I think it is a fundamental foreign policy blunder on the part of the United States and the Western allies.

We are entering the INF negotiations, which ultimately raise European concerns about how much they are protected. Those negotiations lead us to be self-preoccupied with nuclear weapons and lose sight of why the alliance depends on nuclear weapons, which is the conventional imbalance.

We are facing substantial budgetary crises both in the United States and in Europe. Everybody looks to Gorbachev's economic problems which are driving him for arms control. But we in the West have substantial economic problems, and much of our conventional buildup in Europe is a figment of imaginations. It is not a fact of European and American budgets.

So we have got a substantial challenge ahead of us. And if we take a lassez-faire attitude about this, we are going to lose on the diplomatic offensive, that is where I think the Soviets are trying to get NATO to implicitly accept the denuclearization of the alliance, with no counter-weight in terms of public education, and gone through all the pain of that exercise.

And no method, then, to show why it is we need to redouble our will power and pay more for conventional modernization. I think we have everything to lose by not taking a dynamic approach.

And what I find absolutely ridiculous is that we essentially agree on what it is we want from the other side. And why we are essentially waiting. It is like going and buying a car, and you walk in and tell the salesman exactly how much you are going to, he has a chance to look at your checkbook, or talk to your wife, more importantly, ahead of time.

It is not the way to negotiate. You go in and you say, here is what we want from you and let them turn around and tell us what they want from us. Inevitably, inevitably, one way or another, they are going to raise tacair, they are going to raise new, nifty conventional technology, and they are going to raise dual capable nuclear systems.

There is no amount of pre-Western inter-ally debate that is going to keep those issues out. We cannot even have our own proposal on reducing a Soviet tank division from Central Europe, without raising the issue of dual capable systems, because that division already has dual capable systems.

So even if it is prescribed at the beginning, the Soviets will come in and say, well, what happens to our nuclear artillery? And we say, well, we are not quite sure. Then we are going to be off on those discussions.

So I think it is a mistake to try and sit there and pre-negotiate this thing. Rather, we ought to say, hey, here is what we want. Now, let us hear what they want. And that is the best test of reasonableness.

And it ought to go on while we are considering INF. Before we have totally drawn the systems, so we have a sense of whether these guys are operating in good faith or whether it is just propaganda.

If I can also add a comment on your question about CBMs. I agree with everything the Ambassador said. I think we have made some very positive moves there. And they are limited. But a lot of times progress is a series of small steps.

I think there is an enormous danger in overly exaggerating those or trying to use confidence-building measures as a surrogate for conventional reductions. The threat to peace, the threat to stability is the mass of Soviet armor sitting in East Germany.

And there is no amount of inspection teams and Soviet depots that is going to counter that. What is going to counter it is getting those assets out of the GDR. And there is a mistake, particularly among people who do not want to address the hard, tough issues of conventional assets.

They tend to find it easy to throw out, and I am not talking about the Ambassador, they tend to throw out, oh, well, we will grab confidence-building measures. It is a cop-out.

Confidence-building measures without reductions is like one hand clapping. If you can get reductions and confidence-building measures, you can produce, I think, a much more stable era of military posture in Central Europe.

Senator **Wirth**. Senator Quayle.

Senator **Quayle**. Thank you, Mr. Chairman. Let me just pick up on your next-to-last point, Mr. Karber, on the fact that when we sit down and talk to the Soviets, we might as well expect a lot of things to come onto the table, but that should not preclude us from going forward to form our own positions and enter into these discussions.

Do you anticipate that when we sit down to begin to talk to the Soviets, that they in fact will, and we might as well be prepared for it, they will link up and want to talk first about eliminating the tactical nuclear weapons?

I mean, should we assume that this would be their strategy? And is that not their desire, not to get to double zero but to get to triple zero? And will that not be something that they will push very early on, no matter how we proceed? Am I correct in assuming that they are going to do that?

Mr. **Karber**. Senator, you do not even have to assume it. They have said it. Gorbachev in his initial appeal, the Budapest appeal, the Jaruzelski plan, every one of them.

Those of us who look for any glimmers of hope in Soviet utterances tend to forget it, but on a list of 27 things that they are proposing, always number 27 on the list is the denuclearization of Central Europe.

That has not changed. It is on every list. And they are very explicit about it. It is no secret. So yes, I think you can expect them to be coming in with that. Now, whether that is the first issue they raise or——

Senator **Quayle**. But that is a very high priority with them. To try to eliminate and to get rid of the tactical nuclear weapons. I mean, that is a foregone conclusion.

Now then, what should initially and ultimately be our response to that? I mean, are we going to adopt a position of flexibility, that sure, we will sit down and obviously have to talk about it if they put it on the table?

Should we be from the outset saying, no, and I ask both of you this. Do we need a nuclear deterrent in Europe? Should we assume that we are going to continue to have a nuclear deterrent?

And how are we going to proceed? I mean, is there a way that would trade off, reducing tactical nuclear weapons on conventional forces? How do you see this interplay?

Because I think that we are going to be coming to it, particularly in a formulation of an opinion, and particularly as the NATO alliance begins to discuss what its position is going to be. Obviously, because they play to public opinion in Western Europe, public opinion in the United States.

We cannot play to their public opinion because public opinion does not count in the Soviet Union. But they can play to our public opinion, and they do it very well. And therefore I can see that this is going to be a very high profile effort.

What should be our response? Do we need and should we say from the outset that we are adamant in having a nuclear deterrent? I would ask both of you.

Ambassador DEAN. Yes, the Soviet Union will bring this subject of nuclear weapons to the fore, as you suggest, Senator. In fact, it is doing so now. But what we are trying to do in the mandate discussions is to get them to agree not to raise it in the pending negotiations is rather unrealistic. I would rather say to them, we will discuss all armaments—you make your proposal, we make our proposal. I tend to follow what Phil is saying on that subject. Do we need a nuclear deterrent? Yes. We will for a long time to come. But that does not mean that we cannot negotiate away some of what we have in order to reduce the general level.

The Warsaw Pact has at least 1,000 shorter range nuclear missiles, more, according to some estimates, to NATO's 200 or less. It would be very desirable to bring down. The level of these Pact missiles to our level, as regards nuclear capable aircraft, they are credited with more than we have, in some of the counts. It would seem to me that this aircraft, which may well be used at the outset of any conflict at least in a conventional role, could well be reduced, along with the general level of armored forces, which should be the focus of the reduction. NATO should aim for parity not only in armored forces, but in fighter bombers and missiles, and in attack helicopters. So that you bring down the overall level of the confrontation in the course of time.

Senator QUAYLE. Mr. Karber.

Mr. KARBER. I think we should be real clear about what it is we want.

What we want, and I think I can say the we, in the West, in a shared sense, is the reduction of Soviet conventional assets forward.

Now, I tend to think there is no way we are going to end up keeping the nuclear issue out of the subsequent negotiations. That is my general opinion. It would be nice if we did, probably.

But I think we also kid ourselves that Western Europe, and the attitudes toward those weapons, are going to stay as they are.

The people who are concerned about being a fire zone, or firebreak, which they define as a fire zone, the people who are concerned about the asymmetry in nuclear capabilities is not the European Left today, it is the European Right.

Or it is the conservatives in Europe who say, my God, we have just lost the upper top of the umbrella and what you have done is just turned us into a nuclear battlefield. Thank you very much.

I do not think you are going to see a lot of NATO nuclear modernization. Given current trends, not a lot of enthusiasm to even implement the Montebello modernization level.

So we are somewhat kidding ourselves if we are thinking we can sort of carry on this nuclear road. Conducting our own modernization is going to be particularly politically expensive.

Now, as a position, I think we should go in and not raise, we should not put tacair, we should not put nukes, and I do not think we should put our own ground forces on the table. We should let the other side come in.

So in essence we can defer that issue. Clearly, if you take the approach of going conventional first, in which there might be some nuclear components to that, then you are addressing the denuclearization, or the nuclear reductions, from the proper perspective.

It is not in chase of illusory zeroes. It is getting those assets associated with conventional forces proportionate to the conventional forces. And since there is a high inproportion in conventional forces between the two sides, then they are being pulled out.

So it seems to me that it is a mistake to try and ask ourselves how much now of the nuclear assets do we want. What we want is those disporportionate Soviet conventional assets out.

If nuclear weapons come into that discussion, then we ought to handle that on a case by case and only as it reflects the asset, the large asymmetry in assets being withdrawn.

Senator **Quayle**. Do you, either one of you, foresee that a proposal would be ginned up that would say, okay, well let us get down on the conventional forces.

We realize that we have a lot more and they are forward-deployed, and that causes you heartburn, and we will be willing to do certain things. But in return for that, and we will even give you 3 to 1 or 4 to 1 reductions. Big number.

And in return for that we really want to get rid of all these tactical nuclear weapons, because they really will not be necessary anymore, because we are really going to have basic, not only parity, but we are going to move them back further, and you are not going to be as fearful today as you will tomorrow of a surprise attack or to having a quick surge forward.

Is this a gambit that you see as a possibility? And if it would be, would it be one that would be enhancing our security?

Mr. **Karber**. Well, there is a misperception in the West, and the Ambassador alluded to it, but I would like to make it stronger, a misperception, by the way, that was actually a true perception, even as late as the mid-1970s.

And that is that we in the West have nuclear assets or nuclear capability where the other side does not, and we can afford to trade this away for a fair advantage in conventional forces.

In the mid-1970s we had nuclear artillery, they did not. We had roughly twice as many nuclear-capable aircraft forward-deployed than they did. Today, they have as many nuclear artillery tubes as we do. They have got more nuclear-capability aircraft deployed forward than we do. And they have a heck of a lot more short-range surface-to-surface missiles.

So it is not at all clear, to me, there is no asymmetry left in nuclear bargaining to get rid of. So if you are taking out, take the Sam Nunn proposal, which is one that I think is very articulate and well-formulated.

If you take out 50 percent of Soviet forward forces, that means you are pulling out about roughly 400 or 500 Soviet nuclear tubes of artillery. You are pulling out something like 50 Soviet surface-to-surface missiles.

The counterparts on the Western side would be about 400 tubes of nuclear artillery and about 20 surface-to-surface missiles. Now, it is not de-nuking either side. It is reducing the nuclear assets of both sides in proportion to the conventional imbalance being withdrawn.

And that is about as best as you are going to get in that kind of a linkage. And I think that is when you hold tough. Because there is not, if this was 1975 we would have a big pile of nuclear assets to trade for their tank armies.

We ought to remember that in 1975 in MBFR we had the old option three. We in the West went in and said, here is what we will offer you. We will offer you the 36 Pershings, 54 nuclear-capable aircraft, and 1,000 warheads. What we want you to do is pull out a tank army of five tank divisions.

It is interesting what happened. The Soviets did not pull out that tank army. Of the 36 Pershings that we offered up, 180 have now left. Of the 54 nuclear-capable aircraft we offered up, we actually pulled out 100. We are 100 fewer today than we were then. And instead of 1,000 nuclear warheads being withdrawn, we are pulling out 2,500.

In essence we implemented the old option three in spades and got virtually nothing in return. Oh, yes, Brezhnev pulled out a tank division out of East Germany, with much symbolic bands and waving of arms, a lot of pro-propaganda, in December 1979, at the point that NATO was making its INF decision.

It is interesting where that division went to. The manpower stayed in East Germany and beefed up other units. A lot of the battalions went to Czechoslovakia. The division flag went just over the Polish border, and is now in full category, full-strength Soviet division. So the threat actually increased.

We need to be very careful about these kind of asymmetric options. To me the only way, we should not engage in further nuclear arms control related to the theater, until after or only as part of a conventional reduction.

Senator QUAYLE. Ambassador Dean, do you agree with that?

Ambassador DEAN. Yes. I think I would favor a combined approach to this. And I do not think it is necessary for us to put forward what we would do now in this field.

I do feel, in answering your question directly, if we get a much lowered Warsaw Pact strength in Central Europe, they reduce 7,000 to 10,000 tanks there, I think we are going to have a demonstration of a rather different military situation than we had before it. Even if the forces of both sides are equal.

But in the background, for many years to come, until strategic nuclear forces are reduced, there will be some form of nuclear deterrence. There is no question of it.

Senator QUAYLE. Mr. Karber, I guess it is on your second page in your testimony you talk about the West needs a coherent, compelling conventional arms control plan and proposals, to go on before the signing of an INF at a superpower summit, before Senate ratification hearings on a treaty, before implementation of missile withdrawals.

How far would you go in what I see as somewhat of a linkage of INF to a conventional arms control proposal? You mentioned conventional arms control plan and proposal. That means we ought to just think it through. We ought to have a plan out there.

I suppose you could define a plan, might be a plan that is in the President's mind or the Secretary of State's mind. I am not exactly sure how you would define a plan or proposal.

I am curious about how far you would go in the linkage of INF to the conventional arms proposals. Is it something that should be tabled?

And furthermore, in those plans and proposals, should we even go further in linkage to say that we need to have definite progress in reductions of conventional armaments before finalization of the withdrawals of the INF?

My query is, how far do you want to go along this line? I think it is an intriguing idea. But I am not so sure how far you want to go. And I would be curious if you would see how far you might want to go this morning.

Mr. **Karber**. Well, Americans do not like linkage. We like to negotiate and it——

Senator **Quayle**. Call it something else.

Mr. **Karber**. It shows in the history of our negotiations.

In essence, what we have done is negotiated strategic to strategic in the various SALT and START proposals. Conventional to conventional in MBFR. INF to INF. And there are some reasons for it. It keeps it a little simpler, and so forth.

The trouble is that Western strategy, NATO's current strategy, which I might add is part of the law of the land in terms of our commitment to the NATO Treaty. MC 14/3, NATO current strategy, is a vertically linked strategy.

It links the conventional to the battlefield to the theater nuclear to the strategic nuclear forces. All four levels. To the extent that you start negotiating horizontally, you end up breaking your own strategic concept.

And that is much of the concern that you see in Europe. Political concern, I think you are going to see a lot of screaming and wailing this spring about, well, how we do sort of other modernization of other assets.

So, as part of NATO strategy, the current alliance doctrine, the fundamental strategic document, if they are linked, you cannot change one without the other. So, I think it is a mistake to say, well, should we link them? That is the wrong question.

They are linked, and how far do we go in our various diplomatic efforts to introduce separate negotiations that go to delink our own strategy? That is the fundamental question.

So given that, the question then is, okay, should they be tied? I think in the best of all possible worlds, it would have been better to have the conventional negotiations first, then you do the INF negotiations.

Unfortunately, we did not do it that way. And now it would probably be a bit of bad form to say, oh, by the way, there is just one last point we want, a crossed "t" and a dotted "i" we want to add to an INF agreement, and that involves three Soviet tank armies.

That probably would not be seen as very constructive. And that then is the current dilemma. It seems to me that several issues, in terms of linkage with INF, are worthwhile.

First of all, the Soviets have not been adverse verbally, politically, diplomatically to linking other things to INF that are not INF related. One barely has to mention SDI to think of that connection.

I think it is a mistake that we in the West do not point out the linkage of INF to the conventional balance. Because there is a far more tighter balance, or tighter linkage in history, and in current strategy and in policy.

Thus if Gorbachev can get up and wring his hands about the potential laboratory dangers of SDI, Western leaders ought to be able to get up and point out the very real extant fielded, deployed, forward Soviet offensive capability in East Germany, and say, well, something needs to be done about that as well.

Second, the implementation of any INF is going to take 3 to 5 years, depending on what is agreed. It is going to take a long time to meet the verification standards, and then to actually implement the withdrawal.

And it, to me, does not seem wrong when the Senate reviews the INF to turn around and say, and we are making certain assumptions about where the Soviets, their reasonableness in pursuing conventional arms control.

And it is something like the 50 percent point of reductions on INF, whichever administration is in power, have them take a very hard look, and see whether the Soviets are negotiating in good faith.

And if they are not negotiating in good faith, then why is it that we are continuing to implement this break in the NATO strategic concept?

I think it is a mistake bureaucratically and internally not to understand what it is we want from the other side and be able to articulate it to our allies before we get into the INF debate come January.

But since I am not in the administration, that is their problem, I guess.

Senator QUAYLE. So you would have some very specific reservations or understanding that we would have with the INF Treaty in its relationship to conventional arms control and conventional arms reduction.

You threw out, I think, 50 percent. It might be something we ought to look at. Now, I would presume that what we would do is not, upon signing of the treaty or on the presentation of the treaty in the Senate for its approval.

But probably that specific linkage, there is no other term, specific linkage would be during the actual implementation of the treaty. The treaty as I understand it, nobody has seen it. The final is 2 years——

Ambassador DEAN. Three.

Senator QUAYLE. Is it 3? That 2- or 3-year period, whatever it may be.

That during that time, that it would certainly be our understanding that we are going to move forward and we would in fact look at the conventional arms control process and in fact make some specific understandings and assumptions that we would like to see happen.

That is basically what you are saying. Am I correct, Ambassador Dean? Do you think that would be a good way to proceed?

Ambassador DEAN. No. Not at all. I think INF should stand on its own feet, and I think it does, because we get a favorable reduction out of it.

I remember being called into the German Ministry of Foreign Affairs in 1968, before the SALT talks started. They said, you are about to reduce Soviet strategic missiles by negotiation, you are not worrying about these intermediate-range missiles pointed at us. Now, as a result of INF there will be 600 fewer of those Soviet missiles pointed at Western Europe. British and French forces have increased, but are not included under the INF agreement. Neither are American aircraft. And we get the bonus of elimination of the short-range Soviet missiles carrying chemical and conventional warheads that NATO has been afraid about for possible rear echelon on airports and command posts.

The INF agreement stands on its own. If we begin to add to it conditions from a negotiation where we have not even formulated what we want and which has not even started, it seems to me that we will be shooting ourselves in the foot and that we will not get either a desirable INF agreement or the conventional reductions of Pact forces we want.

We will get ultimately something out of these conventional talks. But we will not get something out of these conventional talks if we are not willing to put something in at some stage. I do not argue that we should go to the table from the outset and in what Henry Kissinger has called the Chinese method of negotiation, put everything we are ready to reduce on the table from the outset and say, this is what we are going to do and we are going to stick on it for the next 10 years, lay it all out there. I do not think that is necessary. On the other hand, the real issue here, and it has not come out sufficiently in the discussion thus far, is that NATO does not want to reduce anything. It does not believe that it is in a position to reduce its forces. NATO officials talk about force to space ratio in Central Europe, coverage by NATO divisions of the dividing line, and it does not balance its concerns in this regard, which are real and understandable, with the effects on its situation of the kind of reductions that it is asking for if it gets them and it will not have to reduce anything if it does not. What is the force to space ratio if you are asking for the removal of three Soviet tank armies, after their removal? Is it still the same? Is it still as bad as it was before? And still so bad NATO cannot make any reductions of our own?

This is the problem with the NATO position. The NATO position is asking for things that we should be asking for. But it is not offering to do much of anything in return, even in the longer term.

Senator QUAYLE. Do you agree with Mr. Karber where he said in hindsight it would probably have been better to negotiate arms control reductions before INF?

Ambassador DEAN. We already were negotiating conventional force reductions before, in the MBFR talks. But our Government, and then the NATO governments——

Senator **QUAYLE**. But just looking at hindsight in retrospect, do you think that that would have been a better way to proceed because of the imbalance?

I guess you do assume the imbalance of the Warsaw Pact versus NATO forces.

Ambassador **DEAN**. But we have a forum already, sir, in that these MBFR talks have been going along for a very long time. We could have put a little life into them.

Senator **QUAYLE**. Well, we did not. I guess my question, I just was seeing if you agreed with him that we, in retrospect, probably should have put that up front and said, well, okay, after we finish negotiating, where are we going to be on conventional? Then we will get into some INF discussions.

Ambassador **DEAN**. In an ideal situation, it might have been better.

Mr. **KARBER**. Could I just expand for a minute, Senator, on your point about the linkage?

The reason I stress the INF is that in listening to the earlier questions to the other witnesses, the question has come up over and over, what do we have to give to the Soviets?

Well, what we clearly had that they were most interested in, we have got strong evidence that they are really interested in INF. What we really had was offering them the withdrawal of those systems.

And that is going away. That one was clear. And any ability to reinforce, even symbolically, that relationship, I think in their own mind raises the question of, should we not approach this with good faith, because they might always not fulfill the reduction?

And I think, that is what I meant when I said optimally. This was no surprise. We knew that that is what they were hottest for 10 years ago. So that was our strategic card. The only trouble is, we are playing it way too early in the hand.

Senator **QUAYLE**. Mr. Chairman, I have a couple other questions. But let me yield at this time.

Senator **SHELBY** [presiding]. No, no, go ahead.

Senator **QUAYLE**. Mr. Karber, you said that you had in your mind some of the Soviet intentions and why they were really interested in pursuing conventional arms talks. They put it on the table before we did.

You said this earlier, you said I will not go into it but wait until questions and answers. Let me ask the question. What do they really have to gain? Why are they excited about moving forward, from your own mind? We ought to know where they are coming from.

Mr. **KARBER**. Well, there is a general tendency to see them, as was related earlier, I will not even summarize it, but to see them as having nothing to gain and everything to lose by reducing.

I point out, and I think there are a couple of examples that are worth noting. One was the example of Khrushchev, who even as of yesterday one seems to see more and more parallels to Gorbachev, precedents in terms of the de-Stalinization as well as for the liberalization.

Khrushchev between 1955 and 1962 cut over 1 million men out of the Red Army and withdrew a large number of Soviet forces. Unfortunately, our Western intelligence had underestimated the extent to which Stalin had mobilized the Red Army.

So that when Khrushchev went around claiming withdrawals, we would tend to be very skeptical, because we said, gee, that would mean he would have to go to zero. When in fact, looking back on it, Khrushchev really did pull those reductions.

Let me just walk around, because it also bears some resemblance to somebody else who has been running around the periphery of the Soviet Union calling reductions. Manchuria, Khrushchev pulled out four divisions out of Port Arthur.

Mongolia, five divisions, Soviet cadres were removed from five divisions. Romania, two divisions. Austrian state treaty of 1955, two Soviet divisions for three Western battalions. In combat, battalions have a 10 to 1 ratio, in combat strength it was a 5 to 1 ratio.

East Germany pulled out two divisions. Finland pulled out a division equivalent. And in the interior of the Soviet Union, he converted about 30 divisions, which were active units, into essentially equipment holding units, with barely maintenance personnel.

Now in retrospect, that was not an insignificant effort. Now, what is that went to drive Khrushchev? And I included the chart in here, it is the third one as you go into that mass in the back.

If you look at Soviet available manpower, this chart plots in millions the annual available cohort of 18-year olds. Typically the Soviets take about 90 percent of them. But another 10, 15 percent of that are given deferrals into education.

You will notice that in the period I was just going through, Khrushchev had that drop, you had that very steep cut in available Soviet manpower, then it came back up.

It is essentially a function of two things. Soviet losses from World War II, and the purges. And that is why the manpower——

Senator QUAYLE. What was the second one?

Mr. KARBER. The purges. Most people tend to forget that, but that had a not insubstantial effect on Soviet birth rates.

And it tends to come in generational cycles. You look at the next generation, and there is also again another significant dip. What is interesting is about the time it starts bending over, once again the Soviets are talking about substantial reductions.

Now, this next dip will only be half as deep, but it will be about twice as wide in terms of time. It is shallower but also wider. So, one looks at those historical parallels, there is a potential advantage of the Soviets in manpower savings.

Now, if you combine these manpower numbers with the percentage of great Russians versus Asiatic Russians, the Asiatic Russians are now a much higher percentage of the available cohort.

So if the cohort is going down, and the people who you still want to send to college and universities and be glasnost kind of guys to lead the Soviet economic development, the guys who stay behind increasingly a much higher percentage are Asiatics, who generally have problems with Russian language, they do not intergrate as well in training and so forth. So it is a potential advantage.

Khrushchev himself said, in his memoirs, he cites that a Soviet unit outside the Soviet Union costs them twice as much as one inside. In terms of active manpower, it is actually three times higher.

The typical Soviet division deployed in East Germany is somewhere around 11,000 to 12,000 men. The average Soviet division in the interior is about 3,000. So the biggest single savings, if they are after manpower, and there may be a reason why they might, would be reducing forward forces.

Now, there have been comments about Soviet reductions in technology and savings in industry. My own view is that relative to the manpower of the payoffs internally for them are much more illusory and long-term, and they gain relatively little by having a substantial conventional reduction in savings of, equipment production or assets in the interior.

Senator QUAYLE. So basically what you are saying by this chart is that they may be doing this anyway. Many of the reductions. That is what you are saying, if you go back and use Khrushchev in that time.

They are planning to do this anyway. And therefore two things, they would like to get something for it, something that they are going to perhaps do. And second, that maybe we ought to see how far they are willing to go. Is that what you are saying?

Mr. KARBER. I am not saying they are going to do anything. Because I think the one thing that all Sovietologists can agree on is that nobody knows what they are going to do including probably the Soviets.

I mean, I do not want to sit here and say I have a great insight into the inner workings of the Politburo. I do not. I think there are some potential advantages. There is the interesting Khrushchev parallels.

In retrospect, we might, had we been willing to play a little more tough negotiation with Khrushchev, we may have been able to get further, more meaningful withdrawals, all of the Austrian state treaty.

Frankly, when they do unilateral withdrawals, I do not think we really gain very much. They end up staying in control, they get a lot of propaganda benefit, and it is not at all clear that the military threat goes down.

And the example I will give you is in Khrushchev's withdrawal in 1958 of the two divisions from the GDR. He pulled out two mechanized divisions, but he redistributed the assets, just exactly what Brezhnev did in 1979.

Redistributed the assets so the units closer to the border were more mechanized and stronger, and the net threat out of GDR went up by 20 percent, and two divisions went out.

So yes, he saved some manpower for himself. But the threat for NATO got actually worse. So I think there are real dangers, and sort of again, taking the lackadaisical or lassez-faire attitude and say, well, they are going to take them anyway and a unilateral reduction is as good as a negotiated one.

I like negotiated reductions. For one thing they cannot unilaterally turn them around without substantial political cost, and reintroduce those forces back.

Senator QUAYLE. Ambassador, do you agree with those basic premises that he has outlined?

Ambassador DEAN. Well, I am not quite sure where he is getting to in present terms.

Senator **Quayle**. He does not know.

Ambassador **Dean**. Well, I think the evidence as to whether the Soviets will be flexible in the new talks is really balanced on both sides.

There are a lot of negative indications which Phil has not mentioned. He has mentioned the positive ones. But I do not think he disagrees.

As regard negative indicators, there is the very vested position of the Soviet ground forces. In everything you hear about the new talks from the U.S.S.R., you do not hear a peep out of the ground force command about any give on this subject. All the positive statements come from civilians, institute people and some Soviet officials.

Among the negative indicators, there is worry about the effects on stability in Eastern Europe of large-scale Soviet withdrawals, because a new agreement may well have some kind of provision preventing their easy return, even though that could be violated in a crisis situation. And there is also the point that the Pact does have numerical advantages and why should they give them up. I do not believe myself that the Soviets have been able to translate that advantage into effective political pressure on NATO over the past years, although we worry a great deal about intimidation based on Soviet military power. The actual record is one of complete failure, in the numerous Soviet attempts to do so. However, they may wish to keep the military advantages they have.

The negative factors which I have just mentioned balance off against the positive ones. They leave us pretty much with a zero slate in terms of our capacity to foretell what is going to come out of the new talks in terms of Soviet movement in them, however, there is one factor that may make a positive prediction possible. That is the record of positive Soviet behavior in the other arms control negotiations. Not only in INF, but in the prohibition of chemical weapons, and also to a considerable extent in the strategic reduction talks, the Soviets have a very strong track record in making concessions. If that pattern is going to continue, and I believe it will, then if they take a different tack in the new force reduction talks, then it will stick out like a sore thumb, and will not be consistent with their overall behavior. Western leaders can make this fact clear to Soviet leaders, with some prospect of bringing them to show more flexibility in the new talks.

Senator **Quayle**. Talking about Soviet behavior, that is a topic for an entirely different time, and also compliance with these past treaties. I do not think we need to get into that.

One final question, Mr. Chairman. I want to go to this point that I asked Mr. Thomas about, the previous witness, on the withdrawal versus the actual destruction of these forces.

It would seem to me, particularly when you look at tanks and things like that, that even though it may not be acceptable to the Soviets, but who knows.

I mean, if their behavior in the past leads us as far as giving concessions, why would we not want to start out from the position of not just withdrawal, but we would like to see these things destroyed?

Because my concern is that whether they redeploy it in Turkey or Iran or China, or even if you get them way out of there, at some time they are going to be able to, if they want to, bring them back.

And even though we have, maybe we have a month's warning. What are we going to do in that time? I mean, this is a different issue. But it is something that bothers me. I am not so sure what our reaction would be when we have this warning and they start taking them and redeploying them, say, in, or getting them closer to Eastern Europe.

It would seem that our position at the outset might make some sense to talk about the actual destruction along the lines of INF.

Ambassador **Dean**. I can give you a quick answer to that. I favor that personally. But I think you will find that NATO does not. If any NATO armament reductions are involved, NATO will want to turn them over to reserve units, and, in the case of the United States, store them in West Germany. This was a position we already took in the MBFR talks. That is because the general view in NATO is to move from active duty forces to reserve forces, which are less ready for attack, with limited preparation time.

I believe we would find that, if any NATO reductions were involved, for example, a small package of fighter bombers from both sides, NATO will not want to destroy their bombers. They will want to pull them back, just as you are worried the Soviets will pull back their forces. I would like to have destruction myself. But it probably goes too far for the present state of mind in both alliances.

Senator **Quayle**. Mr. Karber.

Mr. **Karber**. No, I would argue against it.

Senator **Quayle**. Against destruction?

Mr. **Karber**. For several reasons. One is it does not really, what is the problem that, arms control cannot solve all the problems of mankind.

At best, if well-focused, it can help alleviate some of them. What is the problem that it seems conventional arms control in Europe can handle? It can reduce the unstable Soviet forward presence.

It cannot rectify the lack of Western will to build 200 divisions in the West. Or a Soviet willingness to live without 200 divisions.

So if we walk it through, for example, the Soviets themselves have about 10,000 main battle tanks just in Central Europe, not counting their East European allies. If we ask 5,000 of those tanks, 50 percent reduction, a la Senator Nunn, to get out the Soviet Union, get out of Central Europe and go back east of the Urals.

In my view we have done a major service to the stability of the balance, because we have essentially taken offensive power, enough out that they could not launch an attack like they could today without prior reinforcement from the Western military districts.

That prior reinforcement, as opposed to subsequent after hostilities, that prior reinforcement can still come in. What it does is it gives us a clear causus belli for us to mobilize, which is going to be the toughest decision NATO has ever taken.

It is tough to do it under ambiguous warning, when the threat is sitting there immediately in East Germany, and you are seen as being provocative.

It is a lot easier if Soviet divisions are flowing in from the Western U.S.S.R., for NATO to redeploy its units, kick in reinforcements, start digging in terrain, put in barriers, mine bridges, and so forth. All the things that we assume that our defense needs to have.

To the extent that we can get Soviet forward power out, it makes them then have to take actions, which makes it much easier for us to mobilize and put up that prepared defense. Now, to me having 5,000 tanks out of Central Europe is far more important than getting 15,000 tanks out of the Urals.

The Soviets have 65,000 tanks, they and their allies. The vast, 65 or 70 percent of which are aimed at Europe, the majority of which by rail can go into Central Europe. So they are not lacking in tanks.

So having them destroy a few tanks does relatively little. Actually, I think Gorbachev would rather destroy 15,000 tanks in the center of the Soviet Union, or at least the general staff, than pull out 5,000 out of Central Europe.

On the NATO side, if you look at our own, for example, I am using tanks as an example, our own tank modernization, the U.S. Army has less than, 20 percent of our tanks in Germany today are M-1s with not only the survivable armor but with the killer 120-millimeter gun.

Only 20 percent. We still have M-60s in active units, that are neither survivable nor with a high-velocity gun. Now, how do you justify saying, we are going to keep troops there, because there is a defense mission, but we are going to take the best tank that they have got, and destroy it, and leave the old junk.

I just think that flies, it has a certain mass appeal. But I think in practical terms, neither side would see that as making a lot of sense. And I think any negotiations that we are going to get, we are going to end up paying for what it is we ask them.

I would much rather, whatever we have to cough up and pay, I would rather spend my money on getting their tanks out of the forward garrisons, and into the rear, than in having to pay to have them just put tanks in the scrapyard.

Senator **Quayle**. I certainly understand that. The only thing I am thinking is, if they withdraw them from here they are going to put them somewhere else.

Now, where else are they going to put them? Are they going to put them in storage? I doubt it.

Mr. **Karber**. In the Nunn proposal, which I keep referring to because it is one——

Senator **Quayle**. That they have to put them in storage and we come in and examine them?

Mr. **Karber**. No, that they put them back east of the Urals.

Senator **Quayle**. Can they be deployed on a military basis?

Mr. **Karber**. Sure. And that is then a violation of the agreement, and the only thing that enforces that agreement is what every——

Senator **Quayle**. The agreement says that they can or cannot deploy them on a military basis, once they withdraw?

Mr. **Karber**. Well, Senator Nunn has not formed an agreement. But what his proposal said——

Senator **Quayle**. The Nunn proposal then.

Mr. **KARBER**. That is what I was using, is he says, pull the troops out from Central Europe, they have to be deployed east of the Urals, and they cannot be reintroduced, and there is a subsequent ceiling on what is the forward area, and what is in the reinforcing area.

Senator **QUAYLE**. They could be deployed out there on a military basis. They just say they cannot come back east.

Mr. **KARBER**. We might not be doing the Chinese a favor. Though I think even the Chinese would rather have 5,000 tanks facing them and have a much stronger, stable NATO, frankly, than see the West in danger and operating under a perception of substantial conventional insufficiency.

Senator **QUAYLE**. Maybe.

Mr. **KARBER**. We ought to ask them.

Senator **QUAYLE**. Thank you very much, Mr. Chairman.

Senator **SHELBY**. Have we basically lost our top card when we are moving very close to an INF agreement, and we have got it in principle, and it is coming down the road?

Did we lose our real card with the Soviet Union, as far as conventional, by not linking them? Because this is something they really wanted?

Mr. **KARBER**. That is my personal view.

Ambassador **DEAN**. I do not think so. I think we got at least as much back in INF as we gave. If we try to add a lot more freight on this train, the engine may not be able to pull it.

Senator **SHELBY**. What do we have to offer the Soviet Union now on conventional forces? We want to bargain with them. That is what we are getting into.

What can we offer them? In other words, if we have nothing to trade, where are we?

Ambassador **DEAN**. That is the problem. I mean, all of the troop commanders, particularly in the central region, where Mr. Karber correctly wants to focus the reductions, believe that NATO forces are at a minimum, and cannot afford any reduction. That fact does not prevent them from conceiving of very large Soviet reductions. But they do not then turn around and crank the effect of that Soviet reduction back into their calculation of their force posture.

They seem to believe that the confrontation is going to go on forever in rather unabated style, even if the Soviets make massive reductions.

I think what we do have to offer is the possibility of dropping parity, once achieved, of dropping the whole level of the confrontation still further down. But as to whether they will do this or not, is a very open question.

Senator **SHELBY**. But basically, are we not going to have to see if the Soviet Union is really interested in unilaterally doing some of these things, if we in fact do not have a lot to offer in turn? History will show that they have not been.

Mr. **KARBER**. I think that we should not minimize the effect that our nuclear card had.

Gorbachev can turn to the Central Committee or the general staff for that matter and say, look, I did through negotiation what all my predecessors tried to do by bluff and military buildup and were not able to do, which is essentially from his view break NATO's key theater nuclear linkage.

Now, that does not mean that he has denuclearized or de-fanged NATO, but it was a critical link. Now, as we said earlier, we have, in my view, a lot of bargaining power until the last missile goes out.

Now, I would be very careful about not tying that overtly necessarily in a treaty. But for example, if the Soviets invaded China, or if they doubled the number of their conventional forces in Central Europe, would we just blindly go ahead and exercise that treaty?

No. Every treaty has a national interest clause, and if something draconian happens, people will bow themselves out of it. Well, it seems to me that there are certain assumptions that we were making in terms of the conventional balance.

Gorbachev said, in good faith, hey, I am a conventional arms control kind of guy. I want to reduce things. He said it. We did not. So my attitude is, okay. As we go through the verification, it is going to take about 3 or 4 years to get through the verification clauses and actual implementation.

And there is no reason why we should not let them know that we have the right to relook at it. Now, that is not as good a card as it would have been 2 years ago, which said, hey, when you guys walk out, next time you walk back in, we will be glad to talk to you. But it will be after a conventional arms control agreement. Thank you.

We did not play that card with perhaps as much effect as we could have. But I still think there is some aspects there to enlighten them of our concern and the logic of our calculations and then estimate what reductions NATO could afford in the new situation.

Senator SHELBY. Has the anxiousness of the administration or apparent anxiousness to push this INF Treaty, notwithstanding everything, has that troubled you somewhat?

Ambassador DEAN. It has not troubled me. I think it is a very good move to push INF.

Mr. KARBER. Yes. I know the negotiator, for example, Ambassador Nitze, personally and think extremely highly of him.

It is not, what bothers me is not the fact that we would enter into INF negotiations. Or that we would even carry out this specific treaty.

What I find disconcerting is that you do not have any focusing by the leadership of the administration—the President, Secretary of State, Secretary of Defense, for that matter—at this time of the conventional imbalance in Europe.

And why it is that we need those nuclear weapons, or why it is we thought we needed them. Why it is we had made them an intricate part of our strategy. So it seems to me, it was interesting, I had a very rude awakening because you frequently see things from the other side of the alliance, through European eyes.

Just last week in Europe I asked one of the Europeans, why are you guys so upset about Reykjavik for? I mean, really, what really bothers you about it? And they said, you know what makes us mad?

I said, you know, after all, the President did not really do through with it. And there is nothing wrong with the heads of the two superpowers sitting down and having a nice little fireside chat and talking about their dreams for the future. And he did not actually implement it.

So what are you so concerned about? They said, because the reason he did not do it had to do with SDI, not the European military balance.

And, to answer your question directly, if we just gave a fraction of the effort about the need to correct the conventional imbalance in Europe, either through conventional arms control, or through conventional arms buildup, as we go to the glories of INF, I would feel a lot more comfortable.

I think we would be putting it in the proper perspective. And it is not that these people do not understand that. But I think they just have not, for one reason or another.

Senator SHELBY. Someone had written several weeks ago or months ago that they would feel more comfortable, as far as any war in Europe not happening, if we would turn the Pershing IIs over to the West Germans, operation and everything.

And said then there would probably never be a war. We would know there was stability there. I know you can argue it both ways. I guess as long as they are aimed east, it would be all right.

Chairman Levin asked me to make a statement that we will keep the record open for questions or any additional statements that you two gentlemen want to make. But unless Senator Quayle has another observation, this will conclude the hearing. Thank you.

[Whereupon, at 12:18 p.m., the hearing was adjourned.]

ALLIANCE AND DEFENSE CAPABILITIES IN EUROPE

TUESDAY, NOVEMBER 17, 1987

U.S. Senate,
Committee on Armed Services,
Subcommittee on Conventional Forces
and Alliance Defense,
Washington, DC.

DEFICIENCIES AND REMEDIES IN NATO CONVENTIONAL FORCES

The subcommittee met, pursuant to notice, at 9:07 a.m., in room SR-222, Dirksen Senate Office Building, Senator Carl Levin (chairman) presiding.

Present: Senators Levin, Glenn, Gore, Wirth, Thurmond and Quayle.

Staff present: Arnold L. Punaro, staff director; and Romie L. Brownlee, deputy staff director for the minority; Robert E. Bayer, Richard D. Finn, Jr., Judith A. Freedman, John J. Hamre, George K. Johnson, Jr., Michael J. McCord, T. Kirk McConnell, professional staff members; Richelle M. Turner, staff assistant.

Also present: Gregory J. Weaver, assistant to Senator Levin; Milton D. Beach, assistant to Senator Glenn; Robert K. Griffith and Thomas Scott Bunton, assistants to Senator Wirth; Terrence Lynch, assistant to Senator Shelby; William J. Wight, assistant to Senator Warner; Henry D. Sokolski, assistant to Senator Quayle; Jay L. Kriss, assistant to Senator Wilson; Alan Ptak, assistant to Senator Gramm; and Rick Sylvester, assistant to Senator Levin.

OPENING STATEMENT OF SENATOR CARL LEVIN, CHAIRMAN

Senator Levin. Good morning, everybody. The subcommittee will come to order.

This morning, we are holding the sixth in a series of hearings on the state of our conventional defenses in Europe. We will be focusing this morning on some deficiencies in our conventional defense capabilities and what remedies might be considered for those deficiencies.

First, let me put this hearing into context. The NATO alliance is the most successful military alliance in the history of the Western World; it has helped to maintain the peace in Europe for 40 years. That does not mean that there are not serious problems in the alliance that need to be solved.

In my judgment, the conventional defense of Europe is not an impossibility, but in some instances the members of the alliance are its worst enemy in achieving that goal. It is well known that as an alliance, NATO spends more than the Warsaw Pact. Yet, we find that the Warsaw Pact routinely fields a greater number of weapons and larger forces. So, how is the alliance spending its resources?

The alliance is building four different main battle tanks, over 20 different types of combat aircraft, dozens of anti-tank weapons, and 100 different tactical missiles. The four tanks do not even always use common ammunition or common fuel.

In short, as an alliance we certainly spend enough to defend ourselves conventionally, but we are not yet willing to spend wisely.

To address the question of our conventional defenses, we are pleased to have four distinguished experts in the field of conventional forces. We are going to begin by having Dr. William Perry, former Under Secretary of Defense for Research and Engineering, provide an overview of deficiencies in our conventional defenses and alternative strategies to remedy those deficiencies.

After that presentation we will hear from three experts who will focus on deficiencies and remedies in specific areas. Before I call on an old friend, Dr. Bill Perry for his testimony, I will call on another old friend, Dan Quayle and see if he has an opening statement.

Senator QUAYLE. Thank you very much, Mr. Chairman. I certainly welcome back Dr. Perry, who has really been in the forefront on many discussions and challenges that we face in the area of national security.

I think perhaps his most recent contribution was a vast input that he had on the Packard Commission, particularly, as we try to write the reorganization and to create the new Under Secretary for Acquisition. I know that Dr. Perry had a very strong input on that.

Now we are on to another major issue that is facing this Nation, and that is what are we going to do about the conventional imbalance that we find ourselves in in Western Europe? And particularly, the conventional forces in lieu of the pending INF Treaty and what we are going to do about it becomes even more important.

I certainly continue to congratulate the chairman to lead this committee down the route to have a discussion on these issues.

Unfortunately, I am going to have to depart at approximately 9:30 to go to a farewell that the Joint Chief of Staff is having for Secretary Weinberger. I do not know if I will even get the chance to ask Dr. Perry any questions or hopefully get back for the other witnesses.

I do hope that some of the questions that you might be able to comment on are not only what we need to be doing in the conventional forces about some of the new systems, but particularly one of the things that I am very interested in and one of the issues in this INF agreement is the giving up of the ground based conventional cruise missile. I think that cruise missiles have a very important role, particularly in FOFA.

How do we go about increasing accuracy and what is the role in the future of conventional missiles and not just ground based, air and sea-based? We ought to be taking a look at that. I believe that this might be one of the problems with the treaty and something that we ought to discuss.

I am very interested in, any kind of relationship that we ought to have with the conventional arms control reductions and how we ought to connect this with the INF Treaty. I can tell you that that is going to be a very serious ongoing discussion that we are going to have. I can tell you, Dr. Perry, your insights on that would be very, very valuable.

One of the things, as we look at the area of the arms control process, we have talked about withdrawal. I wonder if you might be able to touch upon, and perhaps you will, the option of destruction of these systems as well or in place of withdrawal.

If we are going to be doing this in the INF Treaty, actual destruction of the missiles themselves, why not on the conventional forces as well?

So, I look forward to his testimony. If I do not get to hear it all, I will certainly read it. He has been, in the past, a very valuable witness and has been most helpful to me and I know to others. We certainly look forward to your testimony.

Unfortunately, I am going to have to depart close to 9:30 for the ceremony, but it will not be because I do not want to hear what you say and also the other witnesses. I know particularly, Mr. Donnelly, that we asked to appear on the air war situation. Unfortunately, I might miss that. I will not miss reading the testimony though.

Welcome back, and thank you for coming. We certainly look forward to your testimony.

Senator LEVIN. Senator Glenn, do you have an opening statement?

Senator GLENN. No comment.

Senator LEVIN. Senator Thurmond.

Senator THURMOND. We are glad to have you here.

Dr. PERRY. Thank you, Senator.

Senator LEVIN. Dr. Perry, welcome. You can proceed as you wish.

STATEMENT OF DR. WILLIAM PERRY, FORMER UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING

Dr. PERRY. Thank you, Senator Levin.

As has already been said, the prospects for an INF agreement place a new emphasis on an old problem. That problem is inadequate NATO conventional forces in Europe. I do not plan this morning to review the date which describes this imbalance, let me simply summarize it by saying that in my estimate it consists of a substantial Warsaw Pact numerical advantage, particularly in armored forces, and that advantage is not offset by the rather small edge that NATO has in technology.

For decades, NATO has accepted this imbalance and believed it was offset by the NATO theater nuclear forces. These forces became a very thin reed to lean on at the time the Soviet Union reached parity in their own theater nuclear forces.

From that point on, the credibility of our theater nuclear forces as a deterrent to conventional attack has become strained. The prospects of an INF agreement only emphasize this lack of credibility which already existed.

The reason that NATO has depended on this nuclear offset goes back to the 1950s and a NATO study which calculated that it would take almost 100 fully equipped divisions in NATO in order to sufficiently deal with a massive land attack in Europe. They concluded that that was neither economically or politically feasible.

It is, in my judgment, still not feasible. Therefore, we look for ways for redressing this conventional imbalance without attempting to match the Soviets man for man and tank for tank.

Many people, including myself, reject theater nuclear forces as a suitable offset for our conventional imbalance. Other people believe that the technology can be a suitable offset to this imbalance. It may surprise you to know that I do not agree with that.

First of all, I would say that the technical edge we enjoy over the Soviet Union is primarily in our commercial equipment and in our laboratories. We do not enjoy a great technical advantage in military equipment in the field. In some areas, armor and anti-armor for example, it is not clear that we enjoy any advantage at all.

Second, even in the areas where we have an advantage in technology, numbers are important. Technology can offset a numerical imbalance only to a degree.

Finally, I want to emphasize what I think is a crucial point. The great technical advantage that we enjoy over the Soviets in commercial equipment and in our laboratories, is largely lost because the long time it takes to get our military equipment developed and deployed.

That is a serious issue, and we should not be deluded into thinking that the technical advantage that we enjoy in the laboratory carries over automatically into deployed equipment in the field.

Therefore, it will be difficult to redress this imbalance. My friend Walter Slocomb made an interesting comment on this once which I would like to repeat for you. He said that the NATO imbalance problem is like Parkinson's disease; that is, it is incurable but treatable. The treatment is unpleasant, but it is better than the alternative.

That is the situation which I think we find ourselves today in NATO. I will describe for you very briefly this morning, some of the unpleasant treatments which may be available to us to redress this imbalance.

They fall in my judgment into three categories: first of all, actions which require NATO political decisions; second, actions involving different priorities and allocation of forces and force structure; and finally, some selective applications of technology.

As you see, technology does make my list, but it also comes out third on the list and not first. To understand the importance of the NATO level decisions and the force allocation issues, we have to first observe that a conventional war in Europe for us would be a land war in another continent against a land power who has the most powerful land forces that exist in the world today, and has a tactical doctrine built around the Blitzkrieg; that is on a plan to make a lightning assault with armored forces with the objective of reaching the channel in a number of weeks.

That would be a very unfavorable contest for U.S. land forces. First of all, it is unfeasible for us to keep enough land forces in Europe to deal effectively with this threat. And second, even if we had sufficient forces in the United States, it is doubtful that we could get them there in time to affect the battle.

Therefore, imagining that the United States is going to be a powerful player in this land battle in Europe is, I believe, an error in judgment and should not be the factor that influences our force planning.

The dominant NATO land forces in any land battle in Europe must come from the continental European powers, in particular from France and Germany. The United States has, I believe, a very important role to play in NATO. But in the land war, it is only an assisting role. Its primary role is to become the dominant air power in Europe. I would describe that objective as having sufficient air power available to the United States and applicable in Europe in a matter of days so that we could achieve air superiority over Western Europe. We could also assist the other NATO air forces in conducting close air support and interdiction missions but the United States should take on as its primary responsibility the achievement of air superiority over Western Europe.

I argue that for several fundamental reasons. First of all, this is an area where we are strong to begin with. Second, it is an area where our technology allows us to become even stronger if we give it sufficient priority.

Third, we have excellent air reserve and air national guard forces, which if they were adequately trained and adequately outfitted, could be a decisive factor in an air war in Europe.

Finally and most importantly, we can get our tactical air power to Europe and get it there quickly, unlike trying to move armored divisions over to Europe.

What would it take us to achieve this goal of being able to achieve tactical air superiority in Europe? I believe it is a combination of actions, some of which we have underway, others we have underway but not with sufficient priority, and still others of which are not even underway.

A prerequesite success is the recognition of the priority of the air superiority mission for the United States in NATO, and the corresponding greater assumption of the responsibility for the land battle in Europe by the German and French and other continental forces in NATO.

Second, it requires, I believe, a much greater emphasis on our air reserve and air national guard. This requires a sufficient budget to bring them to full strength, to provide for adequate and ongoing training for those forces and, finally, to outfit them with modern aircraft—F-15s and F-16s.

Third, we must provide and defend sufficient air fields in Europe widely dispersed over Europe. That requires an effort in the NATO infrastructure greater than we are taking today.

Finally, indeed, there is a technology component to consider. First of all, to give us the chance of achieving air superiority in Europe, we must have superior intelligence information on the air order of battle in Europe and have a way of communicating that intelligence to our fighter aircraft. This is achieved today, at least conceptually, primarily through two different programs; the AWACS and the JTIDS program. The AWACS provides an air order of battle over the continent of Europe, and the JTIDS is the data communication system which relays that information to the tactical aircraft.

In the case of the AWACS, we already have the system built and deployed. In the case of the JTIDS, we have it developed and only partially deployed. Of secondary importance in technology is the area of armament. Our fighter aircraft must be equipped with modern air-to-air missiles in order to maintain air superiority over Europe. We have in the AIM-9M an adequate infrared missile but we need it in larger quantities.

And, we have just emerging today, the AMRAAM missile. I am not going to review the AMRAAM program for you. You are well aware in this committee that it has been a troubled program. I would simply say that notwithstanding the trouble that that program has had achieving a modern, effective, medium range air-to-air missile which can be fired and allow the pilot to depart from the engagement is, I think, a crucial factor in our ability to maintain air superiority.

I also believe that it is important to begin now the development of an AMRAAM 2, a substantial improvement over the missile which has already been developed.

A third area of importance in technology is Stealth, making our tactical aircraft difficult to detect. Stealth should be applied in two different ways. First of all, we are designing a new generation fighter aircraft called the advanced tactical fighter. My recommendation would be that in the design trade-offs of that airplane, a very heavy emphasis be put on maintaining low observability, maintaining the Stealth qualities of that airplane.

The second area of application is in the aircraft that we already have built and deployed. We should embark on a program of retrofitting those aircraft, modifying them to reduce detectability to the extent that can be done with an airplane that has already been designed and built.

The purpose of reducing the detectability of these airplanes even by small amounts is so that they can engage in air battle with a range advantage over their opponents. That is, so they can detect and engage an opponent before he is able to detect and engage them. Even relatively small decreases in detectability, decreases of perhaps 10 decibel are sufficient to give that sort of an advantage.

A final comment on technology is in the area of anti-armor. The Soviets are introducing into their armored forces today, a technique known as reactive armor. They are retrofitting tanks already built and deployed with this new reactive armor, the net effect of which is to greatly reduce the effectiveness of our anti-armor weapons, the missiles and artillery shells which we use for attacking Soviet attacks.

Therefore, I think it is imperative that a new generation of anti-armor weapons be undertaken capable of dealing with the reactive armor threat. These new anti-armor weapons would have an all weather capability and a fire and forget capability.

What I have described to you today, Mr. Chairman, is not intended to be a comprehensive description of how you would deal with

NATO problems. I have highlighted a few areas which I think are of primary importance, not with curing the NATO imbalance problem but with treating it. While this treatment is unpleasant it is better than the alternative.

Thank you, Mr. Chairman.

Senator LEVIN. Thank you, Dr. Perry. You have outlined briefly for us, some major restructure that would have to occur for us to address conventional imbalances in a way that would be significant.

The first item on your list was NATO political decisions. You moved fairly quickly from there to force structure reallocation. Can you just spend a minute more on the NATO political decision part?

Dr. PERRY. Yes. What I am implying is not that the United States only provides air power and Germany provides only ground power, but I have described a much greater emphasis in that direction than we have had in the past.

NATO has traditionally resisted allocating responsibilities of that sort to the nation countries. I am not suggesting a full move in that direction, but I am suggesting that this is a trend that we should be undertaking, that we should be taking less responsibility than we now take for the land battle and use the resources to take more responsibility for the air battle.

I have described one advantage that we have in our air reserve and air national guard. I should point out that the German's have a comparable advantage in their ground forces, where they have a substantial and effective reserve force.

An important objective for NATO, I believe, would be for the Germans to be allocating more resources to outfitting and training of those ground reserves.

Senator LEVIN. What have been the impediments politically, to do what we should do to restructure our forces for greater conventional strength? Why have we not done this?

Dr. PERRY. I think that is a complicated question, and I can only give a partial answer to it. Part of the reason for that has been that we have believed our theater nuclear forces solved the problem, that they were a sufficient offset.

I think the first step in approaching a solution is coming to the realization that our theater nuclear forces are indeed a thin reed on which to lean, and that it is an important national security objective to have conventional forces which are by themselves capable of deterring conventional attack. That is a matter of political will.

Second, I believe we have deluded ourselves into thinking that our technology was sufficient to offset Soviet armored advantages. The reason I call that a delusion is because in some areas the Soviets are very good indeed in military technology. Moreover, we are not getting our technology to the field soon enough to fully explain the advantages we have in the laboratories.

Senator LEVIN. Are there also not some parochial problems internally in each of our countries which have driven us to each having our own Air Force, having our own missile system, having our own tank and so forth?

Dr. PERRY. They are not only parochial problems, they are what I would call real problems, that each nation feels that it has a responsibility to defend itself against an attack. Each of them, including the United States, can envision areas of combat besides NATO.

Senator LEVIN. Inside of NATO, is it not difficult to envision at least for us, an attack by one country in NATO on another?

Dr. PERRY. Yes it is.

Senator LEVIN. Is it not politically difficult inside of NATO, just again for purely parochial reasons, to give up each having our own Air Force, each having our own anti-tank missile and so forth?

Dr. PERRY. That is what history argues. It is very, very difficult. I believe that the point you are making I would agree generally with, that an important component of this resistance is just parochial.

Senator LEVIN. Looking at this as kind of a chicken, egg problem, you said that we come to rely on the nuclear forces and therefore we have not had to do what we should do in terms of inner operability and more coherent and efficient use of resources within NATO.

Is not also the other side of the coin true to some extent too, that we come to rely on theater nuclear forces and other nuclear forces because we have not wanted to make the tougher political decisions in terms of having just one tank and one communication system, one anti-tank missile, one air force and so forth?

Dr. PERRY. I agree with that point, Senator Levin.

As you know, I labored in the standardization vineyards for a number of years, and learned that is a very tough proposition to get the nations to set aside their national interests, in favor of actions and decisions which are best for the alliances as a whole.

Senator LEVIN. How long, give us just a timeline now as to how long you believe it would take NATO to do what we can and should do in terms of strengthening our conventional defenses in the way you have described, to have a more coherent and efficient use of our resources inside of NATO to do the things that we have to do in terms of getting our technology more quickly from the laboratory and field and all the other things you have outlined.

Give us an outline. Is this a 5 year process, a 10 year process? I know that it would be tough to probably even point to one point in time when that has happened. But, is this a long process that you are outlining?

Dr. PERRY. Some of the things that I have described are relatively short in terms of nature, in a matter of a few years. We could make, I think, substantial improvements in the capability of and the availability of air reserve and air national guard over a matter of years if we put the priority and resources in that area.

That would not require the development of new technology or new weapon systems—only the allocation of resources that have already been developed. So, we could get a relatively short term payoff on that one.

I have also recommended greater numbers of equipment already developed. Again, that could be effected in a relatively shorter time period. The suggestions which had to do with the advance tactical fighter and the next generation of AMRAAM, are probably 8 to 10 years in the future.

Senator LEVIN. You have also outlined some very difficult political decisions for our allies. For instance, some of the smaller countries perhaps giving up an air force and focusing more on land forces. They have been unwilling to do that.

Dr. PERRY. Yes.

Senator LEVIN. How long do you believe it would take for that to be achieved in the face of an INF, and is it possible realistically to expect Belgium to give up its Air Force?

Dr. PERRY. I do not think that it is realistic to expect that to happen. What I would suggest is an approach which not only ameliorates that problem some but which also, I think, makes good tactical sense that is for the Belgium and Germans to continue its Air Force but to focus it on close air support as opposed to air superiority. The U.S. Air Force could have as its primary objective air superiority with a less objective of close air support.

Senator LEVIN. So there, you are talking about changing the goal of the force structure?

Dr. PERRY. Yes.

Senator LEVIN. Is even that a difficult political decision?

Dr. PERRY. Yes, I believe it is.

Senator LEVIN. Do you believe as a practical matter that that could be made within a matter of a few years or is that a longer term effort?

Dr. PERRY. I believe that if the political decision were made we could see the effects of an improved force capability in a matter of a few years. How long it would take to make that political decision though, is something which is impossible to predict.

Senator LEVIN. You have been around for some time, and I think if there is anybody in a good position to make a judgment on that it would be you.

What is your guesstimate as to the likelihood of that kind of a political decision being made in the face of an INF agreement? We are using this as an example of a tough political decision. I am not just focusing on this one narrow political decision, but using this as kind of an example of the type of political decisions inside of NATO that could be made and would greatly strengthen our own conventional capability.

Do you think that this is going to be an easy or a very difficult thing to achieve?

Dr. PERRY. I would have seen no prospects of achieving that in the last few years. The only reason I make it as a serious proposal today is that I believe that if we have an INF agreement and if we are talking about further reduction in nuclear weapons in Europe beyond that, this will force the Europeans to rethink the importance of their conventional forces. An INF Treaty may create an environment in which decisions can be made in the future which have not been possible in the past.

Senator LEVIN. The road that you have outlined is a difficult road. It means doing some things differently from what we have been doing, to some extent more resources but to even a larger extent, reallocating existing resources. We have been unable to do that.

Even though it has made terrific military sense to do it, we have not done it as an alliance. You are suggesting a course of action, as many of us have, which says that we have got to do some things differently and should, both to save money and because we are going to rely less on nuclear weapons in Europe.

If that is a difficult course, and history has shown that it has been, I guess that highlights the point of my next question which is, there are some that say we should link whatever we do on INF to the correction of conventional imbalances in Europe including things that we can correct by our own action as well as things that the Soviets would have to correct in some arms control agreement.

Would you comment on the wisdom of that kind of linkage?

Dr. PERRY. Three comments on that. First of all, I do not see the merit to bilateral linkages; that is, agreements with the Soviets on INF in that respect. I think the INF agreement ought to be regarded on its own merits.

Second, we might unilaterally link it in the U.S., that is, we might agree that since we are proceeding with this treaty it is the time to get moving on some of the unilateral force improvement actions that I have described to you.

Senator LEVIN. That are within our own control, in other words?

Dr. PERRY. Yes, under our own control. Third, as we look forward to follow ons to the INF agreement either in the area of further reduction in conventional or nuclear forces in Europe, it becomes, I think, quite critical to link these two together and to tie any further nuclear reduction in Europe with a conventional force reduction.

The difficult factor for a conventional treaty will be the necessity for it to be asymmetrical to have any degree of effect because of the imbalance that exists to begin with.

Senator LEVIN. Thank you, my time is up.

Senator Thurmond.

Senator THURMOND. Thank you very much. Dr. Perry, I just have a few questions here. Dr. Perry, are you familiar with our cruise missile technology in its application to conventional defense programs?

Dr. PERRY. Yes, I am, Senator Thurmond.

Senator THURMOND. Do you think that the United States has exploited its lead in cruise missile technology sufficiently in support of our conventional programs?

Dr. PERRY. I think that we have been very effective in developing the technology for the cruise missile in conventional as well as nuclear applications.

We have not made any vigorous move at all toward the application or the deployment of that in land warfare; we have done that only in Navy warfare.

Senator THURMOND. Dr. Perry, the lethality of conventional warfare has increased a great deal since World War II. The 1973 Arab-Israeli war is a good example.

Have our capabilities of reinforcing or resupplying our military forces kept pace with our adversaries in increasing the capability to destroy our forces with conventional weapons?

Dr. PERRY. No. I think that we have not kept pace.

Senator THURMOND. Have you had occasion to study this INF Treaty that is being proposed by President Reagan and Mr. Gorbechev?

Dr. PERRY. Have I what? Would you repeat that, please?

Senator **Thurmond**. Have you had occasion to look into this INF Treaty?

Dr. **Perry**. I have not seen the protocols that are being discussed, Senator Thurmond. I have only read what is described about the treaty in the newspapers.

Senator **Thurmond**. Some people have the opinion that possibly we ought not to enter into a treaty like this unless we have it connected with a decrease in conventional weapons or maybe look at one treaty for both. Do you have any opinion on that?

Dr. **Perry**. Again, just commenting on the bare outline of the treaty, the removal of weapons that are being envisioned by the treaty, I think that has sufficient value in itself I would favor, the INF agreement as it is being described in the newspapers today, because it is an asymmetrical reduction substantially in our favor.

I do not see the necessity to link this to conventional arms reduction, but I do believe that if we go a step beyond that and go down to the battlefield nuclear weapons, then it will become important to link it to conventional.

Senator **Thurmond**. Make your last statement again, I did not hear it.

Dr. **Perry**. I said that if we go beyond the INF agreement to a later agreement for the reduction of battlefield nuclear weapons, then I think that it would be important to link that one to conventional reduction as well.

Senator **Thurmond**. Thank you very much. That is all the questions I have right now.

Senator **Levin**. Thank you, Senator Thurmond.

Senator Glenn.

Senator **Glenn**. Thank you, Mr. Chairman.

If I understand what you are proposing here correctly, you are talking about maybe shifting our responsibility somewhat with us taking a greater role for air and the Europeans taking a greater role for ground basically?

Senator **Thurmond**. That is correct.

Senator **Glenn**. I think in an ideal world, that would be great. I am not sure that it is doable. For instance, let us reverse it. Let us say that our troops are in Europe and we want the Europeans to provide air. Are we going to take the Dutch, the French, the Germans and the NATO allies, and say that we would provide the truce but they would have to provide the air support, for instance?

If we would reverse that, I doubt that we would want that to be the case. Also, they want to feel that they have balanced forces that can do the thing for their own country individually, and I would doubt very much it is going to be possible to convince anybody that they would just rely completely on someone else.

I think that is particularly the case with NATO trusting us. About every 2 or 3 years we threaten to pull everybody out of NATO. We go through this exercise, and have since Mike Mansfield's days way back. So that creates some doubt.

The Iran arms sale creates some doubt about what America does from time to time. I would think that that would be a greater measure of trust and we are likely to be able to engender among the allies to do that, where they would rely more on us in one area and we would rely more on them in another.

I know that in our own particular situation, we have the whole swing concept also. We want to balance forces for our country because we may have something break in another part of the world and we want to use swing forces that go from one theater to another.

The allies in Europe itself do not have quite that same concept of things that we do, of course. Perhaps they could be a little more specialized. I think in an ideal world your idea would be great. The allies work together and we are perfect partners, and we each share a particular expertise in a certain field so we share that with each other and have a better combined overall force.

In a doable, realistic, pragmatic world, I am not sure that it is possible to go in that direction I guess.

Dr. PERRY. Senator Glenn, I think your point is completely valid, and the only response I would make to that is that a partial way of dealing with those problems is to limit this focus to the air superiority mission. I would not suggest applying this to the close air support mission; that is, I would assume that the Germans, the French and the Belgiums and the Dutch would have their own close air support.

I think that they would find it intolerable to go without close air support. I do think that there is some reason to believe that we can make unique, dominant contributions to the air superiority mission in Europe. What the Europeans would have to recognize first of all is, that is a critical mission and second, we have the ability to get our air forces including our swing air forces over to Europe very quickly whereas there is only a very remote possibility that we could get enough armored divisions over to Europe in time to make much difference.

Senator GLENN. Would we, in a concept like this if we were to carry this out, would we ask the Europeans to supply more of the manpower for ground forces?

Dr. PERRY. We would, and we would also ask them to provide greater resources in air fields, the defense of air fields and supplies for airfields. Obviously, in a scenario where we are tipping the balance in a tactical engagement because of our air superiority, the Soviets are going to place a very great priority on attacking the airfields.

Senator GLENN. Would we reduce our number of ground troops in Europe?

Dr. PERRY. I think that would be reasonable. I would not be in favor of eliminating our ground forces in Europe ever. I think that the political reasons for having ground forces there are compelling.

Senator GLENN. You did not mention in the air equation here, another factor. I have supported the B-1 and the heavy bombers feeling that, not on a triad basis. The boys had a little problem with the triad concept. Perhaps being the gospel that the Air Force and the Pentagon sometimes makes it into being.

I have supported the heavy bombers because I think in any conventional warfare situation we are going to need the heavy bombers and need them badly. I have supported them on that basis.

I think that by the time we get to the usual SYOP concept of fighting our way to Moscow with a nuclear bomber, we have already exchanged so many things by that time with whatever the missiles are going back and forth that the great likelihood that we are going to try and reach Moscow with a nuclear bomber after all the rest of the things have been going off is probably reasonably remote.

The triad falls a little short in that area, as far as I am concerned. But, quite apart from that, I think that to try and prevent crossing of the nuclear threshold that both sides would do in a wartime scenario I believe, I do think we still need the conventional bomber role.

I have supported it, and what role do you see for the heavy bomber in a situation like this? That is another one that can be brought to bear on Europe very, very rapidly.

Dr. PERRY. Senator Glenn, I could not agree more with you in that area. As you know, I was not a supporter of the B-1, but given that one has been developed, I think it can play a significant role in supporting our conventional forces, whereas I think it plays a relatively insignificant role in the nuclear forces of the triad.

I would be very much in favor of adapting the B-1 to that mission, and to putting that as its first priority. I think it can play a very significant role in deep interdiction.

Senator GLENN. I might add too, I look at the advance technology bomber, the ATB the same way with the same mission.

Dr. PERRY. That is true, because the biggest problem the B-1 would have even in a conventional war, is surviving the Soviet air defenses.

The ATB, of course, would be able to do that very much better. Even with the B-1 though, I think one thing that would need to be done is improving its electronic countermeasure equipment, which I think is presently unsuitable either for the conventional task or for the nuclear task.

I should also mention that in this interdiction role that missiles play an important role, both the cruise missiles which Senator Thurmond was discussing and ballistic missiles, armed again with conventional warheads.

Senator GLENN. You mentioned technology too, and I wanted to get back to that just a second here. I had felt that we still do have a technology balance in our favor. Now you indicated you feel that this maybe is in the laboratory but not fielded. And, you feel that the Soviets have been more rapid in bringing their technology advances into the field so that we do not have a real technology advantage now?

Dr. PERRY. I think it is spotty in terms of deployed equipment. In tac-air, I do believe that we do have a technological advantage. My point there is that it is not a great enough advantage to offset a large disadvantage in numbers.

So, we cannot rely solely on that technology and ignore numbers in tac-air. In the case of armored systems for land warfare, the Soviets have a comparable technology to ours. In the case of the reactive armor, they have it deployed and we do not have it deployed. That is not exactly a high technology system, but it is a technical modification to an existing system which has rendered much less effective the anti-armor missiles we have developed.

So, it tends to downgrade the effectiveness of our anti-armor technology.

Senator GLENN. I do not disagree with you necessarily. I feel that our technology is still better than the Soviets, and I think we have more there actually ready to be used perhaps.

I think we too often get into the habit here of looking at the forced balances on the basis of what I call for lack of anything better than the Time Magazine approach to it, where they list the things. They have so many bombers, we have so many bombers. We do not have as many so we are behind, and that is not how war is won. At the combat end of things, bombers do not go out and fight bombers.

What you have to do is, do the net assessment thing, and the Pentagon never comes over, never in the 13 years since I have been here, never comes over and presents a net assessment of saying okay, here is a certain bomber. Now, here are all of our defenses. This Sam and so on, and certain missiles and certain fighters go out after that and here are the assets that we have to bring to bear against that threat against us.

If they have a tank coming in, we have everything from nuclear to tac-air to Tow missiles to whatever to bring in and present the thousands or whatever are necessary to balance off that combat capability.

It is always presented about they have 21,000 tanks on the Soviet side, we have seven on the NATO side. Well, tanks do fight tanks, and so that is one equation. But we do have Tow, we have tac-air, we have air to ground missiles, we have all these things that should be brought into this kind of balance.

A net assessment of all their offensive capabilities and what our defenses are lined up against them and then vice versa the other way around, their defenses against our offenses, we never seem to present it that way. I have felt that when you do get down into that kind of assessment of things, I think we still have a technical advantage in the weapons that are actually out there right now over anything that I know that the Soviets have anyway.

We have relied to some extent on the nuclear big stick, which we have to watch very closely as we get into INF and whether we bring conventional balances into future equations of arms control and so on, which I think we absolutely have to do. This INF thing is okay as far as it goes, but we are going to be limited on how much farther we can go down that same track without making sure we bring conventional forces into this whole equation.

That is more a statement than a question, I guess, but I think to get back to where I started, technically I feel we are still superior and have fielded superior technology in what we have over there.

I have felt also that they are gaining in that area, because they can even copy things that we have and bring them to the battlefield faster than we seem to be able to, which is another problem.

I was a little bit surprised that you felt our technical advantage was really in danger.

Dr. PERRY. If we take a specific case using the dichotomy which you have presented which is armor versus anti-armor not armor versus armor, we had I thought, a technological offset to their armor for a number of years. When they introduced reactive armor, then that greatly reduced the effectiveness of that offset.

We now have to take another step, and it is going to be a technological step to get a superior anti-armor system. I think we can do that, and I think we will gain that advantage back again. At the moment, we certainly have a temporary disadvantage.

Senator GLENN. Thank you, Mr. Chairman.

Senator LEVIN. Senator Wirth.

Senator WIRTH. Thank you, Mr. Chairman.

Dr. Perry, thank you again for your great help to all of us on the committee. In the earlier suggestions that we have had we talked about the emerging concerns about conventional arms, you have focused as I remember, on three areas. One, reductions; second redeployment; and third, confidence building measures. That was the framework that you used that I found very helpful.

This morning, is that not a fair way of organizing ones thinking about it?

Dr. PERRY. Yes.

Senator WIRTH. This morning you have talked dominantly about redeployment, redeploying our resources toward air, the possibility of redeploying NATO's resources toward ground troops.

Maybe we could turn to the first part of your ways of thinking about conventional arms control. Could you give us your feeling about what goals we ought to be pursuing in the area of reductions, if any. What should we be pursuing in the area of conventional arms control reductions in the area of tanks, armor, in the area of manpower? Is there a way of looking at this that again provides the kind of a framework that you think is helpful as we move into this arena?

Dr. PERRY. Yes there is. I think that the principal problem that I see to which I think conventional arms control should be addressed is the possibility of the Soviets making an effective surprise attack with heavy armor in Europe. Therefore, I think that the key both with our forces and with our arms control, is to find ways of diminishing that possibility in order to improve stability and reducing the incentives for an attack.

That can be done several ways. One of which is unilateral, by greatly improving our intelligence collection system. We have some very good technical intelligence means today which do a good job but could do a better job on maintaining the order of battle on Soviet armored forces.

A second area is in the area of conventional arms control, where I guess I would agree with the issue that Senator Quayle made, that it would be better to destroy the tanks than to withdraw them however. I think that withdrawing them buys us quite a bit from the point of view of this ability to deter a surprise attack.

If we could get the Soviets to agree to move the great bulk of their armored forces back to the Soviet Union, even some substantial number of them east of the Urals, that would make it very difficult indeed, maybe close to impossible, for the Soviets to quickly mount a surprise armored attack in Europe.

Therefore, I think that ought to be a very important objective of our conventional arms control causing a redeployment of the Soviet forces so that it would be very difficult to impossible for them to mount a surprise armored attack in Europe.

So from that point of view, a withdrawal if they are withdrawing far enough, may be sufficient. It may not be necessary to have a destruction.

Senator WIRTH. What is the level of U.S. ground forces that you think is essential that we maintain in Europe, both from a military point of view and a political point of view, or does becoming a moving target depending on what you do in other areas of intelligence, removal of armor and so on?

Dr. PERRY. I think first of all, there is a bare minimum of land forces that we need to maintain there just for political solidarity. I do not know what that is precisely, but it is certainly a few divisions.

From a military perspective, I think we should be prepared to withdraw some divisions from Europe if we can get substantial withdrawal of Soviet armored forces from eastern Europe—from Czechoslovakia, Hungary, Poland and East Germany.

I believe that is a very great advantage for us to be able to get their armored forces back into the Soviet Union, and we should be willing to pay a price for that. The price could include removing some of our armored divisions from Europe.

Senator WIRTH. We talked this morning about the redeploying of priorities within the NATO alliance. You have suggested greater emphasis on ground troops by the French and Germans, greater emphasis on air superiority for the United States as our mission.

One of the issues that then spins out of that is the question of who provides close air support for U.S. troops. If the Germans and the French are focusing on close air support for their troops, would we assume that they would also have the mission of providing close air support for our troops?

Or really the thrust of the question is, should we be changing our mission to task the U.S. Army to have a greater role in providing close air support?

Dr. PERRY. That is a complex question, to which I am not prepared to make a final judgment. I see enough advantages, however, to having the U.S. Army having its own close air support forces. I think that ought to be seriously explored as an alternative.

I would have to say that I lean in that direction, to having the U.S. Army taking on the responsibility for close air support.

Senator WIRTH. I have just a little time remaining, and one other question which was the thrust of much of the discussion at Mr. Carlucci's hearings in front of the committee last week.

We talked about the familiar bow wave or the fact that we are overcommitted clearly in terms of what we have said that we were going to do in the military versus the resources that are realistically going to be available to fund those commitments.

The question is, where should changes be made? In the discussion on the one hand, the argumentation went that we should continue our support for weapon systems and upgrades and so on. In other words, not cut any weapon systems. From the perspective of many that are politically popular, obviously, have a great deal of momentum.

On the other side, saying no we cannot cut any ground forces or cut any of the bone of the process. If you were in the chair that Mr. Carlucci is about to take over, what would you be recommending to us that we do to get the level of commitment down to a point that it meets a realistic assessment of what resources may be available to fund those commitments?

Dr. PERRY. I am not prepared to give you a comprehensive answer to that question, Senator Wirth. I can indicate a few guidelines that I would be looking at there.

First of all, force structure would not be sacrosanct in my view, particularly as I indicated if we can get to a conventional arms agreement involving either reduction of Soviet forces or withdrawal of Soviet forces. That would, I think, give us the possibility of making some force reduction.

Second, in the nature of unpleasant treatments, I think it is worth reconsidering the issue of a draft. I realize there is no political support or popularity for that today. Nevertheless, the major part of the cost of our Defense Department is in the personnel costs. Those could be substantially reduced if some significant percentage of our forces were draftees.

This is, of course, the situation in the Soviet Union, in Germany, and most of the NATO countries. One of the reasons our defense budget is so high relative to those countries and relative to what is being done, has to do with the higher cost of our manpower.

A third area is in balancing a given amount of dollars, how much is spent on developing new weapon systems versus buying out ones that you already have developed and know that you want. I would tend, I think, to bias that in favor of buying out the weapons that we have already developed at efficient production rates. I described a strategy of outfitting the air reserve and the air national guard. That strategy did not involve the development of the ATF. It involves building more F-15s and more F-16s and building them at more efficient rates.

The new weapon systems that are of highest priority for our forces, I think, are very few indeed. Therefore, I would be seriously disposed to dropping or cancelling some of the programs that are under development today. But, I am not prepared to give you a list of what those would be.

Senator WIRTH. That was going to be my final question.

Dr. PERRY. I imagined that.

Senator LEVIN. You saw that one coming, did you not?

Dr. PERRY. Yes.

Senator WIRTH. Thank you, Mr. Chairman. Thank you, Dr. Perry.

Senator LEVIN. Since Senator Wirth's time is up and he does not have time to ask that question, I will ask the question.

You might, for the record, give us some suggestions in that area, Dr. Perry. They would be welcomed if you have any later on, as to what specific systems we might be able to cancel.

We will also keep the record open for the purposes of others who could not be here today, perhaps to send questions on to you and you might have a chance to address yourself to some of those questions.

I just have one more before we move on to our other panel or move back to Senator Wirth.

What you have identified this morning as essential force in the area of conventional defense, is that there are two directions that we need to go. One is in our hands, and one is through arms control with the Soviet Union.

In our own hands, we can reallocate resources, we can put more resources into conventional defense, we can do more intelligent defense work with our allies, conventional defense coordination with our allies. That whole area is within our own control. Difficult politically, perhaps, particularly in terms of some decisions that would have to be made.

Within our own control as an alliance, to what extent do you believe that the achievement of a sound and credible conventional defense will be derived from both roots?

Would you rely more on conventional arms control to achieve that goal, or do you believe we could rely more on what we can do ourselves, the unilateral type of steps inside the alliance?

Dr. PERRY. If you would have asked me that question a year ago, Senator Levin, I would have said I would rely on unilateral actions because I did not have any great prospects for anything significant being accomplished in conventional arms control.

As a result of developments in the last year, I have opened my mind on that question. I think there is a possibility that we can get some significant conventional arms control reductions with asymmetries. I do not have any insight into the thinking in the Soviet Union today, but I have read enough that I think it would be remiss of the United States not to try to accomplish that kind of a conventional arms control reduction.

It seems to me there is at least the possibility that that can be done. The things that we would have considered completely remote 1 year ago or 2 years ago, now seem worth considering and worth proposing. I think we should be very aggressive in this area now, not simply respond to Gorbachev initiatives in arms control but make some initiatives of our own and have them directed toward this asymmetrical reduction in conventional forces.

Senator LEVIN. The Soviets see the conventional balance very differently from what we see, as they see much of the rest of the world differently from the way we see it. They see asymmetrical on our side as well as on theirs.

When you talk about asymmetries, do you include the possibility of asymmetrical reductions on both sides, or are we talking exclusively about asymmetrical reductions on the part of the Soviets?

Dr. PERRY. I have a hard time seeing where the asymmetry is in our favor in the conventional area in Europe.

Senator LEVIN. In some of the air power, in some of the air statistics, we have some dominance both numerically and qualitatively.

Dr. PERRY. For the military strategy I described, I want to lean even heavier on that advantage.

Senator LEVIN. I understand. But that is an asymmetry that they see?

Dr. PERRY. Yes. It has been suggested that there is an asymmetry in our technology that we could give up. I do not know quite how you would describe or enforce that sort of a treaty, so I have not developed any enthusiasm.

I am open minded in principle, Senator Levin, I just do not have the example in mind.

Senator LEVIN. That is helpful. Thank you, Dr. Perry, for your presence today, for your testimony which is always helpful to this committee. Again, some of my colleagues may have some questions and perhaps you could have a chance to answer those later on for the record.

Dr. PERRY. Thank you, Senator Levin.

Senator LEVIN. The next panel we have is Dr. Joseph Braddock who was Vice Chairman of the 1985 Defense Science Board Study on Armor/Anti-Armor Competition, and he will focus on the land battle.

General Charles Donnelly, U.S. Air Force retired, was the former Commander in Chief of U.S. Air Forces in Europe, and he will focus more on the air battle.

Finally, Mr. Leonard Sullivan, who is the former Assistant Secretary of Defense for Program Analysis and Evaluation, and he will examine a range of ideas for improving conventional defenses which have not received adequate attention by our planning establishment.

All three of you we welcome. I think that we will just go in alphabetical order. If you all want to come and take your seats.

General Donnelly, if you will sit on my left and Dr. Braddock in the middle, and Mr. Sullivan on my right. We have your name plates that way. Why not start with Dr. Braddock.

What I thought we would do is, have each of you proceed for a few minutes, perhaps 5 or 10 minutes summarizing testimony where you have written testimony. In some cases, I believe, we have written testimony and we will make them a part of the record of course. Why not proceed more informally perhaps, for 5 or 10 minutes each, and then we will have questions after you are all done.

Dr. Braddock.

STATEMENT OF DR. JOSEPH V. BRADDOCK, VICE CHAIRMAN OF 1985 DEFENSE SCIENCE BOARD STUDY OF ARMOR/ANTI-ARMOR COMPETITION

Dr. BRADDOCK. Thank you, Senator Levin.

I was asked to discuss the armor/anti-armor balance in the context of the whole issue of NATO defense strategy. I would just like to make a few opening remarks relative to that.

To put the armor/anti-armor issues in context, NATO depends upon a triad of forces, nuclear and conventional. Within the conventional arena, it depends upon a spectrum of capabilities: air, land, naval. We have made improvements at the margin to in my view, deal with the most threatening options that the Soviets have in the conventional arena over the years, because we have depended upon this triad of capabilities.

When one of our military areas of importance gets out of balance, we tend to try to redress the balance in it. When we have an advantage, we can employ to improve the situation across the board and we usually try to do that. We have gotten some accidental advantages in some cases, and we have run into some problems in others.

What I would like to discuss in the armor/anti-armor balance is a set of circumstances that have run against us, having started off with a success on our part. So, I would like to take you back into history a short way, about 15 years.

The advent of the successful development of anti-tank guided missiles permitted the United States and its allies to proliferate large numbers of accurate, lethal, long range, infantry weapons that were in principle, inexpensive. A Tow missile, as an example, or Milan missile, cost at that time several thousand dollars. The cost today is probably about seven or eight.

Innovation on the part of our commanders in Europe in deploying and employing these additional weapons permitted the thickening of our defenses. The use of the mobile fire power we had in the form of tanks to be changed to permit counter and spoiling attacks. And, it created a number of problems for the Soviets. They immediately saw that the dependence that they had on armor as the real theater force that they were going to use in the conventional arena. It is now vulnerable to these proliferated weapons.

Even though today you hear discussions about the reactive armor, the Soviets embarked upon a very comprehensive set of measures, if you will, the development of technology, operational innovation, additional artillery, all of these intended to reduce the effects of these proliferated anti-armor weapons.

They started quite early to do this, in the early 1970s as our developments came on, and the first thing they did is what they could do, which was to increase artillery so that they could suppress these defenses with artillery.

The second thing they did was to revise an old concept which they had, which permitted them to insert an exploiting force with its own sustainability and operational maneuver group into our thickened defenses to disrupt them.

The third development was really a set of developments, to look into the armor program which they had, to look for better methods of protection.

It is worthwhile looking at that armor program which they have, because we are often criticized for not fielding things. We do not get the matter to the laboratory fast enough and to the field. The Soviets are credited with doing that more efficiently.

It is the scale of the program that permits them to do that. If you look at the data available, the Warsaw Pact alliance manufactures and fields almost 4,000 tanks a year, about 6,000 infantry fighting vehicles, and currently is fielding about 2,000 pieces of artillery every year.

If you took that inventory, and most of it is pretty good equipment, and thought of it as modernizing any of the Army's in NATO like say the U.S. Army, those numbers would permit you to completely reequip the U.S. Army every year. So when you are running a program like that with that much R&D in it and that much production in it, you naturally are pulling things from the laboratory into the field.

On some occasions, we have thought of some of the things that the Soviets do as having a momentum of their own, and possibly that is true here. But, this has been going on for years.

We are up against an opponent who believes that he should modernize this component of his forces in a large way every year. When you consider the size of the Soviet Army, it is a modest changeover in equipment, because here is an Army which has hundreds of divisions.

These improvements though, have essentially negated the technological and operational—it is that combination of advantages which NATO got out of both the fielding of the anti-tank guided missiles and then the development and fielding of the new main battle tanks which we have; the Leopard in Germany, the M-1 here, the Chieftan in Great Britain.

Where are we today? Technologically, this combination of things which the Soviets have done have offset these advantages. Do we have fixes? Some are being explored today. Some were explored a while ago in other areas. For example, hyper-velocity missiles which are being developed mostly with SDI money offer some really overmatching capabilities in this anti-armor area. For that matter, might even pick up some of the slack in the air defense area as well as in the ATPM area.

So we have a situation today, where one of NATO's principal pillars of strength, that is its forward land defenses, has a serious problem. It is not that the other areas do not have problems, they do. We have inadequate numbers across the board.

But to maintain the balance, we have to do something about this area today. Whatever we do, we should try to work in concert with our allies, with technology transfer where that is necessary, cooperative development where we can do it. We have a few things going on there, I might add.

If we pay attention to this area, we can probably redress the imbalance that we have, correct these deficiencies in the next, I would say 5 to 10 years with expenditures increased at the margin here and there. If we try to do it more rapidly, it will stick out, it will cost real money.

If the Soviets really field the things we expect them to field, we may be forcing them to do that. For example, in East Germany today, most of their force structure has T-64Bs and T-80s, all of which appear to be being upgraded with reactive armor at a great rate.

Do not forget the other things are there already; the increased artillery, the tactics, the indoctrine, the training related to the use of operational maneuver groups and so on. It is all three problems that we are trying to solve.

We have to solve them to maintain a cohesive defense with that forward line of forces which we have. That is part of making the whole triad work. That is the technical and sort of operational situation today. And, since I was invited as a result of activities which the Defense Science Board undertook 2 years ago, there have been technology developments which have really been impressive.

A program to really capture all of these things has not coalesced, and the momentum that we need to fix things has not been generated.

That is sort of the progress report on where things stand. That is the end of my statement, sir.

Senator LEVIN. Thank you, Dr. Braddock.

General Donnelly.

STATEMENT OF GEN. CHARLES DONNELLY, JR., USAF (Retired), FORMER COMMANDER AND CHIEF, U.S. AIR FORCES IN EUROPE (USAFE)

General DONNELLY. Mr. Chairman, thank you for the opportunity to appear today. I do not plan to read my short statement. I would like to submit it for the record.

Senator LEVIN. It will be printed in full.

General DONNELLY. I would like to just talk a little bit in summary of the statement, and I appreciate Dr. Braddock's comment on the triad of forces necessary to fight any battle wherever we may be fighting in the world.

I do not really believe that we can isolate any one particular service or force, because we know full well that we will never win a naval battle all by ourselves again, a ground battle, or an air battle. It takes a joint, three forces, land, sea and air, to get that done.

For the air battle, the air battle is basically again, many faceted because there are so many things that air has to do and should do. Close air support certainly, but also interdiction and as Dr. Perry talked about, the air superiority battle.

The important thing about air is to understand that we cannot say air superiority only, because air superiority means many things to many people. To some it means strictly air to air using missiles, but to an air commander it means taking out the enemy command, control, and communications, taking out their airfield, taking out their defenses, all of the things necessary to permit our airplanes to operate in an environment without their defenses being effective, that is air superiority. It is a larger job than many people give it credit for just by using the words.

The basic role of the Air Force and the air campaign as I see it, is to make sure that the U.S. Army as well as the other armies of our allies, are supported and that we reduce the casualties as much as we can because of Soviet or Warsaw Pact attacks.

That can be done with the current inventory of aircraft because we have a very well coordinated command structure in Europe. I, having served as its commander for 3 years, am very satisfied that the commander control structure we have and the coordination we have between the land and naval forces will be sufficient for us—and in fact, very darn good for us to prosecute an air war in Europe.

Everybody is not going to get all the air they want. In other words, every division commander and every battalion commander is not necessarily going to get all the air he wants at the particular time that he wants, only because there are just not enough aircraft to go around.

Also, Mr. Chairman, I would have to comment that there is not enough air space to go around, if you are talking only about Central Europe. Central Europe is the size of Oregon, and on a conceivable air day, a reasonably good day like today, we call this German VFR, visual flight rules, we can anticipate around 8,000 sorties. That does not include support sorties, such as transports, E-3s, E-

8s, or helicopters. So you have to say, in order to get the air moving through the air, it would be an impossible task to make sure that every battalion commander had his own air. There is just not enough air space to do so.

There are a lot of limitations where we might fight in the world. The Korean peninsula has a very similar problem. The air campaign has to be structured in command and control as well as equipments. Once you get the equipments, and I feel we have very good equipment for todays war, and anticipating better things to come in the future and with the command and control and the intelligence we currently have today, I think we would deport ourselves very well in Europe if attacked by the Soviets or the Warsaw Pact.

Mr. Chairman, I would appreciate more questions, I suppose, than continuing on with a summary. I have just recently got the invitation to come here and I really have not had the chance to review totally your committee hearings in the past.

I will now go to Mr. Sullivan, if that is all right with you, sir.

Senator LEVIN. Very good. That will be fine.

Mr. Sullivan.

[The prepared statement of General Donnelly follows:]

Prepared Statement of Gen. Charles Donnelly, Jr., USAF (Retired), Former Commander in Chief, U.S. Air Force in Europe (USAFE)

Mr. Chairman, Members of the Committee: I appreciate the opportunity to share my views with you on the continuing importance of countering the Warsaw Pact air threat to NATO. I want to state at the outset that I believe this to be true regardless of whether an Intermediate-range Nuclear Force treaty is concluded with the Soviet Union.

In recent years, the need for increased NATO conventional capabilities to defend Europe from Warsaw Pact aggression or coercion has forced NATO and the US to re-examine their force modernization and employment plans. This need has resulted primarily from the changed force relationships of NATO and Warsaw Pact forces, specifically:

The USSR's achievement of essential nuclear parity or superiority across the spectrum of strategic nuclear systems.

The continued expansion of Soviet superiority in numbers of conventional forces.

The closure of the technology gap between NATO and Warsaw Pact conventional capabilities.

This change force relationship has made it more difficult for NATO's strategy of Flexible Response to deter with existing conventional force capabilities—both as a peacetime strategy and a warfighting strategy. Increased NATO conventional capabilities are critical if NATO is to deter Warsaw Pact aggression and lessen NATO's current need for early resort to nuclear weapons should deterrence fail. This is true with or without the impending INF treaty. With such a treaty, however, the urgency of increased conventional capability is increased.

That said, the overall mission of NATO's armed forces is to contribute to deterrence of aggression. But, deterrence is most assuredly retained when NATO forces are ready to fight and win against Warsaw Pact forces across the spectrum of conflict. To better define our warfighting mission, the Supreme Allied Commander Europe (SACEUR) has developed a conceptual military framework made up of several key mission components.

One of these key mission components is attaining and maintaining a favorable air situation. The objective of this component is to minimize the impact of Warsaw Pact follow-on forces and air power to enable NATO forces—land, sea, and air—to be able to conduct operations at a given time and place without prohibitive interference. To attain this goal, NATO must be prepared to mount an effective defensive and offensive air campaign.

Multi-national air, naval, and ground forces would participate in this counterair campaign. The campaign would entail defending NATO forces from attack by Warsaw Pact conventionally armed aircraft and missiles as well as attacking these systems in Warsaw Pact territory. German Minister of Defense Woerner has coined the terminology "extended air defense" to encompass the concept of countering the improving Soviet conventional missile capability as well as manned aircraft.

Air operations would be both defensive and offensive, Defensive counterair operations, or air defense, would be conducted in reaction to enemy attack. These operations are not an end unto themselves, but rather have the purpose of providing security from which all elements of the joint force can operate effectively. Basically, this means defending our forces and facilities from enemy air attacks. Successful conduct of the defensive air battle would require the integrated operation of all air defense weapon systems of all services and nations.

Active air defense through the integrated employment of air-to-air and surface-to-air systems is necessary to blunt enemy attacks and protect air and surface forces. At the current time, it is a well-known fact the Warsaw Pact maintains a significant advantage in numbers in almost every major conventional force elements. Projections for the 1990's are worse, not only in numbers, but also in the improved quality of forces the Warsaw Pact is fielding. Although there are many slightly differing sources, this equates to NATO's air forces being outnumbered—depending on the specific area involved—by a factor of about 2:1 to 4:1. To counter that threat now, a significant percentage of NATO's air forces—including swing-role F-16s—are prepared to conduct defensive air operations until a favorable air situation can be achieved. It is no secret that the Soviets are introducing a new generation of fighters that will have improved aerodynamic and fire control capabilities roughly equivalent to the F-15 and the F-16. This generation of Soviet fighters is expected to appear in significant numbers by 1995. If not countered, this new threat would likely take away the qualitative edge that is critical in countering superior numbers with quality forces that are able to achieve high exchange ratios in air engagements while keeping attrition low. Because of this, continuation of the Advanced Tactical Figher (AFT) program is most important. Of equal importance is the early fielding of necessary inventories of AMRAAM and PATRIOT missiles. These systems are absolutely essential to maintain a qualitative edge over Soviet fighters in the 1990s. Additionally, the NATO Identification System, or NIS, is a critical system in assuring that active defenses are not only effective against enemy forces, but that friendly forces can survive in the midst of the defensive battle.

The other major portion of the defensive battle is passive air defense. Passive measures can be extremely effective in denying the enemy success of his air operation by allowing our forces to survive and continue to operate. As Soviet capability to deliver attacks against NATO forces far to the west of the forward ground battle with modern aircraft and conventional missiles has increased, so has the importance of passive defense. Because of this envolving Warsaw Pact capability to attack in depth with aircraft and missiles, some NATO facilities supporting land, sea, and air forces will be attacked and damaged. Neutralization of NATO air power is a key goal of Warsaw Pact strategy. The Air Force's Air Base Operability program has gone a long way toward improving passive defense capability and giving the Warsaw Pact planner great cause for uncertainty, but more can be done including hardening, force dispersal, and improved damage repair.

Offensive air operations give the NATO commander the opportunity to seize the initiative in the air campaign. The purpose of the offensive air battle is to limit the number of aircraft sorties and missiles the Warsaw Pact forces can launch against NATO forces and territory. If NATO cannot conduct offensive air operations against Warsaw pact forward airfields, surface-to-surface missile systems, and C^3 facilities, the Warsaw Pact can significantly increase air attacks against NATO forces and territory. Offensive air systems do not entail only aircraft, but include remotely piloted vehicles, short range air to surface missiles, and special operations forces. For the Air Force, the F-15E and LANTIRN will help redress a long-standing deficiency in being able to carry out offensive air operations effectively at night and in bad weather conditions. We must deny enemy forces a night or weather sanctuary! They should also provide us increased leverage by being able to operate in conditions where enemy air operations will be greatly reduced in intensity and effectiveness—and where enemy defensive systems will be denied the use of their preferred optical modes of operation.

All of the various aspects of the NATO air campaign, including defensive operations consisting of active and passive air defense and offensive operations, will be applied against Warsaw Pact air power. These operations are synergistic and will lead to the desired objective of attaining and maintaining a favorable air situation.

The Warsaw Pact will maintain a quantitative air advantage over NATO in the foreseeable future. Therefore, NATO must maintain its technological advantage to ensure a qualitative edge and exploit the potential that improved command and control systems offer. The NATO air campaign must be integrated to the point that limited forces can be concentrated to meet and defeat the Warsaw Pact air operation. To provide this integration, NATO is progressing with the development of the Air Command and Control System, or ACCS. This is another program of vital importance in strengthening NATO conventional capabilities.

Attaining and maintaining a favorable air situation is a necessary prerequisite in assuring success of the ground war where emphasis must be on defeat of the lead echelons of Warsaw Pact forces. NATO's forward defense forces are oriented toward fighting these lead echelons to prevent breakthroughs into NATO territory. Since Warsaw Pact ground force commanders will have the early initiative, they will be able to choose the points of concentration. NATO forces will mobilize to counter this concentration. NATO airpower provides highly flexible firepower which can quickly be redirected to prevent or blunt breakthroughs. Now, and in the past, this has been recognized and acknowledged in NATO, but the key to success here i.e., getting the *right amount* of air power to the *right place* at the *right time*, has been the toughest problem. In the 1990s, an effectively integrated Joint Surveillance and Targeting Reconnaissance System (JSTARS), will provide the key to success in this area. This type of battlefield intelligence and information relay capability will provide the ability for air forces to respond quicker at the right places and allow ground forces to effectively adjust to the changing battlefield situation. Close air support to ground forces will continue to be a key mission for NATO air forces.

While NATO's forward ground defenses will fight the lead echelon, SACEUR has determined another key mission component to be follow-on forces attack (FOFA). The objective of FOFA is to attack and neutralize Warsaw Pact forces in-depth before they can engage and overwhelm the forward defense. This concept is not new. In fact, NATO air forces have always been and will continue to be responsible for attacking such forces as part of the theater interdiction campaign.

Any warfighting strategy for Europe must be built on the foundation of an effective defensive and offensive air campaign plan. This is true throughout their European Theater. Allied Command Europe may be required to fight this campaign in three distinctly different geographic regions. In the northern and southern regions, NATO forces face larger expanses of territory and open water. In many cases, we would not expect the same quantity of forces on either side to be engaged as in the central region. Nevertheless, the same intensity of combat could occur in all regions, and the total air campaign will continue to facilitate all other objectives of NATO commanders.

For deterrence to remain strong, regardless of an INF treaty, the Warsaw Pact planner must be so uncertain of the outcome of a war in Europe that he would be dissuaded from initiating hostilities. But, we must never be lulled into thinking that strong conventional, theater nuclear, and strategic nuclear capabilities do not and cannot provide the ultimate deterrence. The age old adage "To maintain peace, prepare for war" remains true. Let us also recall Air Chief Marshall Sir John Slessor's comment that " . . . the greatest social service that a country can provide its people is to keep them free."

Thank you Mr. Chairman. I am now prepared to take your questions.

STATEMENT OF LEONARD SULLIVAN, JR., FORMER ASSISTANT SECRETARY OF DEFENSE FOR PROGRAM ANALYSIS AND EVALUATION

Mr. SULLIVAN. I have to plead the opposite problem, Mr. Chairman. I am over-prepared. I have been writing a book on this subject and have been studying this subject for so long that it is hard not to talk about it. But in accordance with your wishes, I will let my submitted testimony stand and I would like to comment on the issues that I raise on pages 8 and 9.

Unfortunately, Dr. Perry boiled his issues down to three. I have 14, so I will try to scamper through them as fast as I can.

Senator LEVIN. As you are scampering, pull your microphone a little closer if you would.

Mr. SULLIVAN. Yes, sir.

I think it is important to try and realize that the future defense of the NATO area has to be taken within the broader context of the interests of the western countries. Although this is the subject of my book and I will not belabor it here, I think we would do well to recognize that the defense of the West is really considered to be a necessary evil. We cannot sit here and keep hoping that we are going to get more money from the Congress than we have in the last several years.

I think that Senator Wirth's questions that asks "what are we going to do? How do we lower our aspirations?" are absolutely central to the problem of the future. They come at a peculiar time, with everything else that is going on .

The first of my 14 points is that there is no question but that the alliance members in general have got to accept the fact that they have declining marginal resources to devote to their active military forces. That is going to be true throughout the alliance and there is no way we can expect the Europeans to pay a lot more in this very important area of burden sharing.

Second, I think it is absolutely clear that there is going to have to be diminished dependence on nuclear weapons on the battlefield. I believe that there is nothing inherent in the current conventional imbalance to warrant the retention of those tactical nuclear weapons. Here, I probably am somewhat apart from the other people who are testifying before your committee this morning.

My third point is that it is possible to very substantially improve conventional firepower without increasing conventional troop levels. I am very particularly disturbed when I hear people equate troop reductions to force reductions. In fact, it is the presence of all those troops that mean we have so little force. I would hope that this would bring a question later on.

My fourth point is that the reason we are spending so inefficiently is not just on the acquisition side, Senator Levin. You cannot solve this problem by just buying more efficiently. It is the issue of how much you are spending for peacetime manning levels compared to how much you are spending to invest in their future requirements.

If Senator Wirth asked me what I would do if I were emperor—and I am not going to be—it would clearly be a reallocation between Active and Reserve forces, and particularly amongst the ground forces. They consume their own net worth about every 3 years when they are on active duty, and they consume their own net worth about every 18 years when they are on reserve duty. There is a substantial difference there between the two.

My fifth point, sir, has to do with the fact that if we are truly panicked by the extent of the Soviet Warsaw Pact armor on the ground, then it is preposterous that we have not prepared the defensive battlefields and made it impossible—or at least more difficult—for that armor to come galloping across the inter-German border.

I conservatively estimate that somewhere between 1 percent and 2 percent of USGNP is devoted to the fact that the Germans are unwilling to put up some sort of impedance system between those two countries.

Senator LEVIN. Some sort of what?

Mr. SULLIVAN. I call it impedance. I hate to call it a barrier, because then people give me a middle name, "Maginot," and I am not interested in that. In fact, you can raise very markedly the resistance to the free passage of 60 ton tanks when they have to rumble across the ground. To the extent that we have not prepared the defensive battlefield, we are in really tough shape.

Senator LEVIN. Let me just stop you there for one second before you get to your next point. What do we call them in Korea, do we call those impedance systems or barriers?

Mr. SULLIVAN. I would call them impedance, because again any barrier can be knocked down. But impedance can force the attacker to knock at the gate for a while.

Senator LEVIN. Is that the word that is actually used by the Army in Korea to our barriers?

Mr. SULLIVAN. Impedance, no. They consider them barrier systems.

Senator LEVIN. Do they actually use the word?

Mr. SULLIVAN. Barrier systems.

Senator LEVIN. Barriers. You take a risk on the Maginot reply by using the word barrier in Korea.

Mr. SULLIVAN. Remember, our Army did not put them in. The Koreans put them in. The Koreans put them in when they thought we were leaving, and that had some symbology in it by itself.

Senator LEVIN. Excuse the interruption.

Mr. SULLIVAN. I enjoy being interrupted.

The next point is that the ground forces have an opportunity to depend a great deal more on indirect fire systems. I think here I would agree with Bill Perry that we still have a largely unfielded technological advantage. There is a very great difference in the exchange ratio between direct fire systems which engage the enemy before he can engage us. I believe there is still an inherent advantage in the West which we could exploit to a far greater degree than we have.

I would tend to neutralize Dr. Perry's statement in one area. It is terrible the way witnesses come and claim that each other is wrong. It is the advantage of being last, I suppose. The reason we cannot match—we the West cannot match the East in armor, is because we chose not to build it and we chose to build airplanes instead.

If you took the same amount of money that we have put into our investment in military equipment over the last 20 years, we could have bought the Soviet inventory and had money left over, because they bought equipment that can grab land and they did not buy equipment that flies over it.

I do not want to go into it in any more detail here, but the reason we have disarmed ourselves on the ground is because we have armed ourselves in the air. There are some very, very strong tradeoffs there, which Americans and westerners are unwilling to accept. Rather than leave you with a loaded question, the reason we are unwilling to accept large ground forces is because those ground forces are too expensive manpower-wise unless you put them in the Reserves.

The Russians found the same thing, and put well over half of their ground forces in the reserves. We seldom count the fact that many of their tanks are either in unmanned units or reserve units rather than active units. So again, we create our own problems.

The seventh point I would like to make is that the initial defense of the inter-German border and the inter-Korean border should not be done by our best offensive forces. Here, I believe we have a very extraordinary situation where in football parlance we have chosen to put our first string backfield into the defensive line.

I would argue very strongly that the initial defense of fixed borders should be done by troops and equipment that were designed to do that and not designed to attack across Western Europe over a period of 2 or 3 months. There are enormous opportunities to specialize the initial defense forces.

Let me move on to the fact that I also believe that NATO's insistence that everybody have a part in the opening play in this game, is deadly wrong. We have more diverse forces on the inter-German border than is sensible, and we therefore create our own interoperability problem.

If you think of NATO forces as a slab of plywood, the last way you would want to present that plywood to the enemy is edge-on. You would like to put it the other way so that the strength of the laminates works out in depth rather than exposing the seams between the laminates the other way.

I also believe that the dependence on forward defense against the enormous initial momentum of an armor attack is simply unrealistic. Although it may be popular from a political point of view, it does not make much sense militarily. We have to establish a defense in depth.

Ten, and I am getting to the end, I think the West has to return to a greater dependence on both military and particularly industrial mobilization capabilities.

Senator Wirth, again I wish I was answering your questions to Bill Perry. One of the things you could certainly do in ratifying the INF Treaty is make sure that the Congress, for a change, protects industrial mobilization funding for our conventional forces in this country. That is the only way we will be able to rectify a conventional imbalance if we suddenly decide that the threat is large enough to do something about. Industrial mobilization is a strength of the West and a strength of the United States, in particular, and it is a crime that we have let it petrify. It is another direct fallout of our over-dependence on nuclear weapons.

Nuclear weapons has been equated to no need for industrial mobilization capability. If you take the nuclear weapons away, the industrial mobilization capability has to be reestablished.

Point 11, we have established a strategy which insists on our ability to defend NATO first. This may seem flattering to our allies but it has resulted in the generation of forces and a deployment of forces that mean that there is no way that we could defend NATO last.

So we are, in fact, dependent on the war beginning in NATO and then possibly spreading elsewhere. If it ever occurred to the Soviets that they would start the war elsewhere and let it creep toward, NATO, the American forces would be drained of their capabilities before the NATO war began.

In fact, the strategy we have espoused is inadequate unless we can take care of wars that start elsewhere and force the Europeans to take a bigger role in the European phase of it.

Thirteen and 14 I will go over very fast. Clearly, I support a reduced American presence in Europe. I would leave the units—the divisions—there, but I would reduce the manning to a level so that we can enhance the investment in their firepower.

I do believe that as we reduce our presence in Europe and let the Europeans do more, they must have a larger share in the leadership and there must be, to a greater extent, international manning of the infrastructure missions.

We must evidence a willingness to back away from trying to be the center of all wisdom and military capabilities on the European continent. That is my statement, sir.

[The prepared statement of Mr. Sullivan follows:]

PREPARED STATEMENT

by

Leonard Sullivan, Jr.

(National Security Consultant and a Director of
The Atlantic Council of the United States)

Good morning, Mr. Chairman:

I very much appreciate this opportunity to appear before you to discuss a subject of great contemporary importance. In this prepared statement I would like to set the context in which I believe NATO conventional force modernization should be developed. In my verbal statement, I will focus on the basic principles which I believe should guide that modernization program (see pages 6-9).

I have recently completed the first version of a continuing Atlantic Council study with the intimidating title "Comprehensive Security and Western Prosperity". This study concludes that events over the past two decades have changed the world scene and warrant a fresh look at the scope and foundations of the Western Alliance, with an eye to reorienting responsibilities and contributions for our common good. It looks at both the strengths and vulnerabilities of "the West", assesses its overall "correlation of forces", and suggests a set of major challenges which we would do well to address promptly and collectively.

The work is intentionally provocative, and is based on the premise that substantial changes in intra-Western responsibilities are overdue. The Council hopes to conduct further consultations with various allies to continue to improve the scope and depth of dialogue on this important subject--as soon as our background report becomes available.

Meanwhile, my views on specific available technologies for "The Initial Defense of Fixed Borders" are soon to be published as part of a book summarizing a recent National Defense University symposium entitled

"The Future of Conventional Defense Improvements in NATO". My "top-down" views stem from the former effort, my "bottom-up" views from the latter.

Foundations for the future of the Western Alliance:

The Atlantic Council report concludes that we must reorient the cooperation between the free, sovereign nations of the Western community towards these more positive goals, rather than continuing to exaggerate our somewhat artificial focus on collective military security alone:

- The basic shared objectives of the total Western community deal with prosperity, not just security. This includes not only economic prosperity, but political and ideological prosperity as well;
- The peoples and governments of the West generally treat their security as a "necessary evil" on the road to prosperity and not as an end in itself. In large measure this is a fundamental difference between the West and the Soviet-dominated "East";
- Any review of the comprehensive security of the West should thus address the full correlation of economic, political, ideological and military forces at the West's disposal

The Real Strengths of the West:

Our study concludes that, in the total aggregate "correlation of Western forces", the West is in a class by itself, and is so recognized by the rest of the world. To fail to acknowledge this extraordinary and unique vitality--and the envy it inspires--would be shortsighted:

- There is virtually no serious external threat (Soviet or Third World) to our extraordinary and unparalleled combined economic strength;
- There is virtually no serious external threat to our unsurpassed political and ideological vitality;
- Only in military strength is the West challenged by the East. Total Eastern and Western forces are roughly matched given the great uncertainty (on both sides) as to total participation in any specific contingency.

Non-military Threats to the West:

The Counvcil report concludes that there are no non-military areas where there are any real threats from East or South which should impact on intra-Western relations:

- The major dangers to Western prosperity are economic in nature, and primarily generated within the West itself;
- There are virtually no major risks in the political and ideological domains from external forces, although the self-complacency of the West might incite some ill-advised opportunism from the East or South;
- Our differences over the management of East/West relationships remain one major irritant within the West;

Military Threats to the West:

We believe that a new assessment must be made of both the most likely and the most serious military confrontations, of the chances of their occurence, and of the priorities that would otherwise prevail.

- The most likely military threats come from competing superpower intervention operations spawned in response to regional conflicts. Such North/South contingencies could accidentally trigger an East/West confrontation;
- The ultimate military danger involves a general nuclear war growing from a major conventional NATO/Pact war;
- The chances of a NATO/Pact war are extremely slim; the Soviets are far more likely to try to use their predominant military forces for political intimidation, not warfighting;
- Deterring our own intimidation by that raw but almost useless Soviet military power may be far more important than deterring warfighting;
- The chances of a nuclear war that is not preceded by a major conventional war appear non-existant;
- Were it not for this remote but extraordinary military potential, much less creative energy and resources should be spent "fretting" superpower relations: in fact those relations should rank third in importance after West/West relations and North/South relations.

Major Western Challenges:

The Council concludes that there are three major groups of issues which should lead the agenda for not just our NATO alliance, but the broader and less well defined "Western alliance":

1. Living with the Soviet Union:

We have tried to formulate the essential ingredients in finding a way for the West to "live with the Soviet Union":

- The fundamental Western security concerns relate to the apparent unwillingness of the Soviets to: foreswear exporting revolution; accept a stable "balance of power"; and approach the West as competitors rather than adversaries;
- The West does not fear economic, political, or ideological competition with the Soviets based on a "correct" or "ethical" basis, recognizing Western strategic and vital national interests;
- The West needs to find ways to increase the Soviet stake in existing international institutions and accepted behavior patterns;

2. Living with "the South" and "Managing" the World's Economy:

We also need to codify our overall Western goals and obligations towards economic progress in both South and East.

- There is an inescapable struggle for the South to share the prosperity of the North:
- There is an obligation for the North to help those LDCs willing to help themselves;
- The West must manage the World's economy in such a way as to encourage economic progress in both the Third World and the East--including the Soviet Union--so that they too may enjoy the confidence and security derived from a prosperous economic outlook.

3. Burdensharing within the West:

We need to adopt a broader formulation of "burdensharing" which provides a more more realistic foundation from which to address the needed changes in the allocation of "the West's" resources and responsibilities:

- It appears to be high time to "review the bidding" on what is required to assure our comprehensive collective security and to assess each Western nation's contribution to it. (Current imbalances reflect two decades of major changes within the West.)
- Western interdependencies generate economic burdens which must dictate some constraints on both national advantages and expedients;
- There are many areas in which Western political/ideological burdensharing could improve both the real and externally-perceived cohesion of the West;
- Military security costs are still the greatest single area of uneven burdensharing. They stem in part from outdated views of the military balance and the relative ability to pay, and in part from threats which do not necessarily match regional capacities to deter or defeat;
- Leadership responsibilities must recognize the limits of American infallibility and encourage greater regional and topical responsibilities to match needed skills--and cultures--in dealing with the full gamut of East-West, West-West, and North-South issues;

- Western cooperation in enhancing our prosperity must be related to the sharing of responsibilities and burdens in the context of the overall correlation--and vulnerabilities--of Western strengths. It will not be sufficient to bicker over military burdensharing while ignoring other essential demands of--and contributions to--our common goals.

- Ultimately, the superpowers themselves must also come to realize that they, too, have responsiblities and burdens to share for the good of the rest of the world. These common goals surely include: avoiding nuclear war; avoiding raising havoc with the world's economy; and assuring the right of others--both individuals and countries--to prosperity and self-determination.

Major Current Military Issues:

Within this broader context, the issues of military burdensharing are still ikely to remain the driving problems because of their economic implications. Out of politeness or diplomatic nicety, the major problems in military burdensharing remain under the rug; Japan's defense spending still remains no better than 1 percent of GDP, and Canada's remains at only 2 percent. The major NATO allies (Britain, France, and FRG) have inadequately equipped or structured reserve forces and field very little conventional combat sustainability. This has contributed to over-reliance on the nuclear aspect of NATO's deterrent and makes a mockery of the so-called "flexible response strategy". In sum, the West retains a political strategy for deterring a major war in Europe or in Northeast Asia, but no realistic, operational warfighting doctrine--if deterrence fails. The West is unfortunately far better prepared militarily and politically for getting into a war than for getting out again!

The Value of the NATO Alliance:

Views of the adequacy of the NATO military alliance vary greatly depending on whether the perspective is towards the past or towards the future, and towards its usefulness as a political instrument or a warfighting instrument. There can be little question that it has, in the past, served a magnificent purpose in discouraging both Soviet adventurism and West European intimidation. In otherwise volatile political circumstances, the NATO structure has provided an important element of stability. It has served as a constant reminder that despite economic competition and serious political differences, there remains a vital security dependence which warrants the attenuation of lesser issues. Furthermore, the extent of common interests far exceeds the range of disagreements, and in fact the perceptions of a common European future are still growing. NATO "cohesiveness" will always appear less than desired during periods of low external tensions, but has always returned when stressed.

Nevertheless, circumstances are changing substantially. The pervasive Communist threat has devolved into a more traditional "normal" Russian threat. The United States has turned into another less than perfect "normal" superpower. American leadership is clearly no longer accepted without question. The collective political and economic strength of Western Europe now exceeds that of its benefactor, in theory if not in fact. Nevertheless, Europe's room for marginal investment in defense is declining. Demographics insure slower rates of future growth and will soon impact on the conveniently tolerable size of European active military forces—most prominently in West Germany. At the same time, the Russian threat appears to be receding (despite its increasing strength), and the potentially major reduction in European nuclear forces will raise the importance of conventional forces. Simultaneously, there are unmistakable signs that the American contribution in manpower, if not in real "force", may have to be reduced.

Possibly the only thing that could "kill" the NATO alliance would be its refusal to accept the rapidly growing need for adaptation to the new realities. It is within this broader context that we must seek a new equilibrium point between security and prosperity. It is in the long-range interests of the West to assure that "defense of the status quo" does not overwhelm the increasing need for change.

The Foundations for Revising NATO's Conventional Defenses:

By the year 2000, these changes could be quite substantial. The following elements are almost certain to be part of that change:

- A decreasing willingness among virtually all Western nations to allocate more of their declining marginal resources to standing military forces;
- Greatly diminished dependence on escalation to battlefield, intermediate, or intercontinental nuclear weapons;
- Substantially improved conventional firepower, even without additional manpower or increased force levels: it is quite possible to *reduce troop levels and increase force levels*;
- Significantly reduced manning levels, with a greater dependence on a period of useful *strategic* warning in which to mobilize European reserve forces and to bring a sustaining industrial base up to speed;
- Better preparation of the defensive battlefield in a manner which is politically and symbolically acceptable, but which provides unambiguous tactical warning and substantial impedance to the rapid penetration by heavy armor;
- A potentially greater dependence on ground forces using indirect fire weapons and a significantly lower early dependence on vulnerable and costly tactical aviation;
- Greater dependence on special purpose, largely reserve initial defense forces which can blunt the initial aggression without dependence on extensive prior mobilization and redeployment;
- Realignment of the division of responsibility to lower the unrealistic number of different and incompatible national forces in the forward defense zone--while increasing defenses of the rear (resupply) areas;
- Further departure from the militarily unsound notion of "forward conventional defense without depth": this could eventually lead to a *semi*-demilitarized border zone;
- Substantially greater dependence on both military and industrial mobilization in times of crisis, with a much closer relationship between the civil economy and defensive military needs;
- A significantly smaller permanent American active force presence, but quite possibly without reductions in total on-line deliverable American firepower;
- The development of an international strategy which will permit the successful defense of Western Europe even if the war starts elsewhere and spreads into NATO--rather than the unlikely onset in NATO, spreading elsewhere;
- A military command structure relying more on European leadership than American leadership—and on a European military industrial base more than an American one;

- Far greater use of international manning of infrastructure missions such as command and control and logistics--and possibly extending to the operation and control of all residual nuclear weapons.

The majority of these shifts in military posture could apply equally well to the defense of the fixed land border between the Koreas. The ability to approach such dramatic changes will require careful and positive political preparations and the full cooperation of the host nations involved. The common defense of Western interests is not a matter for debate. The attainment of that defense under political and economic terms acceptable to all the participants should become a major item on the agenda of the West in the very near future.

There is no reason for assuming that crises are more likely in the NATO/Central European environment than elsewhere. It is probably the least volatile region for military miscalculation. On the other hand, the Mediterranean (e.g., Greece/Turkey; Egypt/Libya; Israel/Syria; Libya/-Chad, etc.) and Middle East are the primary theaters for interaction and there are growing opportunities for miscalculation in the Caribbean Basin. The military situation between North and South Korea remains far from tranquil. China might provide good offices in assuring peaceful solutions of disputes on the Korean peninsula. In each of these troublesome regions, there are several neutrals or members of the West who could provide valuable--in fact essential--crisis control functions.

A Time for Change:

There has been a remarkable period of political and economic stability in the World over the past two decades--a generation, in fact--despite some very large changes in the "ideological contest" between East and West, and in the military contest between East and West. It is now becoming more apparent, however, that there may be some serious dangers in the continued complacent perpetuation of the status quo. Historians might well conclude that some healthy changes have in fact been suppressed for too long. Beneath the seemingly serene exterior, some major forces are at work.

In the decades since the end of World War II, Western nations--their leaders and their peoples--seem to have lost sight of the wisdom that real security goes well beyond military might. The West needs to revitalize this wisdom today, stressing the economic, political and ideological factors--as well as the military power--which guarantee our peace, freedom, and economic growth despite the many diverse threats to global stability. This revitalization of the sense of comprehensive security policy should encourage the identification of policy trade-offs in terms of long-term collective and national goals, as well as the integration of the various strands of comprehensive security policy.

It was the purpose of the Atlantic Council study to assess some of these in terms of the "correlation of forces" both between East and West, and within the West. Like segments of the earth's crust beneath our view, tensions are building all around: between East and West, between North and South, and within each superpower's outdated alliance structure. Within each country there are increasing tensions between the domestic and world perceptions of the young and the old; between the expanding "rights" of the haves and the have nots; between the political outlooks of the "ins" and the "outs"; between self-interest and the national good; between self-satisfaction and obligation.

At the same time, the ideals, fears, and hopes of the world are changing. The US is no longer viewed as the world's role model. The balance of economic power has changed permanently away from US dominance. The full impact of excessive borrowing has yet to be felt by either the US or the Third World. A brash set of newly industrialized countries have shut down American smokestacks. Technological prowess can be gained by virtually any diligent nation willing to invest its resources. The overwhelming precedence of the Soviet Communist threat no longer dominates domestic issues. Terrorism and religious fanaticism herald increasing anarchy in parts of the "liberated" Third World.

The overall military balance has changed dramatically from US dominance to a "parity" of sorts. Preoccupation with the nuclear confrontation may at last be "drifting away". The beginnings of a major military "build-down"--conventional as well as nuclear—could be at hand. The chances of armed Soviet aggression to change the map of Europe have become vanishingly small, and without immediacy. The need to modify substantially the strategy and military posture in NATO is being thrust to the forefront by demographics and economics--and by possibly major reductions in nuclear arsenals.

The new Soviet leadership acts as if embarrassed by its own economic shortfalls. Perhaps General Secretary Gorbachev is serious in shifting priorities from external aggrandizement to internal development--a task of extraordinary challenge and difficulty involving the very bases of their cultures, economic ideology, and centralized governmental mechanisms. The political balance within the West has not shifted to reflect these other realities. In fact, in many respects "the West" is already proving hard pressed to restrain the initiatives now pouring from "the East" and "the South". It is even losing the "public relations contest" to the Soviets. It is having difficulty even organizing itself to address major combined arms negotiations "from the Atlantic to the Urals." And it has yet to find the means to cope with the "profligate" spending patterns of the US--or the extraordinary productivity of Japanese industry.

Throughout the nations of the West—and perhaps of the East as well--there seems to be a growing realization that the resources for marginal investments in their own future may already have been overcommitted relative to the more constrained growth now forecast. None of us appear able to justify marginal expenditures which add little to our security, and only at the expense of our future prosperity.

This is an extraordinarily ripe time for major changes in world relationships, Mr. Chairman. The United States is obliged by its leadership role to foster that change. The illusive quest for a conventional military balance in Europe remains the largest single drain on those declining marginal resources. There are better solutions. I wish you success in beginning to implement them.

Senator LEVIN. Thank you very much.

Mr. Sullivan, you have basically suggested to us that we might be able to defend ourselves with conventional weapons even with fewer resources?

Mr. SULLIVAN. I believe we can, yes, I do.

Senator LEVIN. That is a rather radical suggestion.

Mr. SULLIVAN. Yes, it is.

Senator LEVIN. I compliment you for it.

Mr. SULLIVAN. You better decide whether it is correct or not first. [Laughter.]

Senator LEVIN. At least I compliment you for the courage in making it. I think it is something that we all have to face. We are going to have to face more going into the INF debate because it is going to be connected to that debate whether it should be or not, the issue of conventional capability and whether we can defend ourselves with conventional weapons even though we have plenty of nuclear weapons left after eliminating a few hundred.

Nonetheless, the whole issue of the relationship between conventional and nuclear weapons is going to be debated, and there are not a whole lot of folks who have taken the position that you have on this. I think it is important that that point of view be heard, the one that you have outlined for us today.

Mr. SULLIVAN. Could I make one comment sir, and I will break in only to be sure that I understand your position. It is not just a trade between nuclear forces and conventional forces, it is also a trade between American conventional forces and European conventional forces.

And unless you can make that trade at the same time, you may very well end up on the short end of the stick.

Mr. LEVIN. You have mentioned that troop reductions do not necessarily mean force reductions a couple of times in your statement. Would you go into that a little bit more?

Does the bottom line then, the outcome of that position mean that we could actually perhaps achieve a conventional arms control agreement where both Soviets and NATO could reduce forward deployed troops without reducing the conventional forces that we have in the West?

Mr. SULLIVAN. Yes. I believe that to be very true, indeed. It is not only a question of manpower reductions. I must say sir, that if you look closely at the way the Soviets manage their forces, they are not as far leaning forward as ours are. That is because ours are garrisoned in a foreign country and they have no choice but to be all on active duty if they are there.

The Soviets are not leaning forward quite that far. But yes, I believe that the money we are consuming in MILPERS and O&M throughout the Western alliance would be better spent on the development of indirect fire weapon systems, many of which would not even be mobile.

I think the business of developing an initial defense capability cannot be done with a heavy armored maneuver division, and it cannot be done with a tactical air wing. Both of those were designed by Americans to do something quite different other than initial defense.

I believe we can, in essence, deliver the equivalent of nuclear firepower in the first couple of days of a NATO war with conventional weapons that were fired by German reservists.

Senator LEVIN. You have gone into some length in your prepared testimony and a bit in your oral presentation, Mr. Sullivan, about what some of us still call barriers. Again, realizing that we are opening up ourselves immediately to the conception in the listeners mind that we are trying to invoke a Maginot line. We still use the words barrier anyway, because we know that we have them in Korea and they serve a purpose. We know that they might buy us a few days time.

They are not penetrable ultimately, but it may buy us a few critical days time and cost $1 billion roughly per day in logistics and supplies for each days time that we are trying to buy.

So barriers, even if they only buy us a few days time, can be a very few critical days. I have visited the border a few weeks ago and saw that we simply just do not defend it with all the ways we could defend it, very cheaply.

I think I understand why we do not do it. Since I am not testifying and you are, what do you think the reasons are that we do not, for instance, place underground tunnels for instance that we could fill with fluid and blow up or some of the other things that you have talked about?

Mr. SULLIVAN. I am not a fluid in the tunnel man but other people are.

Senator LEVIN. Give us some of your ideas, and tell us why we do not?

Mr. SULLIVAN. There are two major reasons why there are no barriers between East and West Germany. The first is the political objection of the Germans to the idea of the permanent separation of the two Germanies. I fully support that, even though I think the Germans are not as worried about that as they used to be, now that there is as much traffic back and forth between the two. I think that mood is changing.

The second reason is that there is nothing in American doctrine that favors the use of permanent defenses when our forces are garrisoned in somebody else's country. The U.S. Army wants to defend Western Europe with divisions, and the U.S. Air Force wants to defend Western Europe with tactical air wings. Neither of those are appropriate to stopping the early flow of a massive armor attack across the border.

Now, Joe Braddock has done these calculations and not myself. It is no easy problem to get 20,000 tanks followed by, perhaps, 150,000 ancillary vehicles across that border in a period of a week or two. If you can cause a traffic jam such as we have out here on 495 all the time, you can really begin to destroy that material when it is stopped. There is then no question where it is.

I would like to say sir, that if you let your imagination go in the direction of things that are acceptable in the 20th century that are still barriers—or impedance—you can find them without too much trouble.

Just as a for instance, if you put very solid steel toll booths at the border—everybody is used to paying tolls—and if they are only nine-tenths of a tank width apart, it tends to slow down the tanks.

You can have something that is completely porous to the traffic, the commercial vehicles and people in cars and still very much inhibit the passage of a tank. You can do it by weight, width, a great many things.

Senator LEVIN. General Donnelly, you wanted to comment?

General DONNELLY. Sir, I hear what Mr. Sullivan is saying.

I would suggest, however, that you should like to talk to General Otis, the commander of our Army in Europe. In fact, we do have some barrier plans but he would not be able to tell you about them in open testimony.

There are plans. There is no doctrine that says we are against barriers. Barriers buy you time, but they do not save you money. In other words, they give you time to delay and disrupt the enemy and as Mr. Sullivan so rightly says. An attack fighter wing is, in fact, an indirect fire weapon.

As far as I am personally concerned, we have spent our money wisely, if in fact Mr. Sullivan is recommending indirect fire weapons. That is exactly what a fighter is; it is not only a direct fire weapon.

The fact of the matter is, as I said earlier, it takes the synergistic effect of all the forces necessary to defend and also to go on the offensive. We are not defending with tanks on line, we are defending with other forces on line today on the borders between Czechoslovakia and East Germany with forces designed to defend.

Now, they may not have every piece of equipment they would like to have, to be able to have to defend, but they are, in fact, in a position to defend with plans for barriers and other choke points—to establish choke points through various and sundry means to slow the enemy down.

I just think that before we go too far, Mr. Chairman, I would like to get the warrior's attitude into this as to how we plan to fight the war today in Europe, as I left it 6 months ago.

Mr. SULLIVAN. Senator Levin, I would also recommend that you listen to General Otis, and I would agree with the things that he says, and I have heard some of them. He is also very much worried about the lack of indirect ground-based firepower that he has. So, ask him about that at the same time.

Senator LEVIN. I have talked to General Otis, as a matter of fact. The plans that we have are not for the barriers that are pre-placed, as Mr. Sullivan has proposed.

General DONNELLY. I would comment that yes, the toll booth is effective if the tank is going to stay on the road.

Senator LEVIN. I am not talking about a toll booth. Let me talk about the type of a defense which Mr. Sullivan does not particularly support apparently, which is just some underground piping not visible which could be filled with explosives and then blown up immediately within a matter of hours. Those are pre-placed and they can create very deep and wide ditches to make it difficult. Again, are they impenetratable, no they are penetratable, perhaps over a period of days. Do they defend Europe? You are right they help defend Europe. Why have we not done it? We have done it purely for political reasons.

What we have to realize is that there is a whole host of things that we have not done as a NATO alliance for political reasons.

They are politically undoable in Europe and sometimes here. What they means is, we have not taken steps within our financial means to defend ourselves, that is what it comes down to.

We have chosen to rely on nuclear weapons because they are easier and cheaper politically, to put into place in many instances. They are no longer that way in many places. There is real political opposition to them.

There was an impediment inside Germany of doing anything which might suggest that Germany is divided. So you cannot put a visible barrier up there, because that might imply that Germany is divided.

That is the principal reason why we have not taken that step to defend West Germany. I find that, frankly not only unacceptable, but I do not think the American public fully understands the extent to which we have relied on nuclear weapons because we have chosen to. Politically, we have been unwilling to take the tough decision within our means to improve our conventional defense.

That is, perhaps, a simplified conclusion but there is some truth to it. Not just on barriers, by the way, in a whole host of things that we have not done to provide a conventional defense.

I am not disagreeing, General Donnelly with what either you said or what Mr. Sullivan said. I am just giving you my own impression after talking to General Otis. I have spoken to General Otis, by the way.

Let me just use my last minute for questions, if I have one left, to Dr. Braddock.

Dr. Perry told us that we should emphasize an investment in Air Forces and not in ground troops for the defense of Europe. I think General Donnelly has already commented a bit on that, but would you agree with Dr. Perry's assessment on that greater emphasis on air and a lesser emphasis on ground forces?

Dr. **Braddock**. No. I would say that we should continue the emphasis that we have on balance, because we are uncertain as the way things will be in the future. There are a few problems that we have not talked about there, one of them being demographic.

The manpower situation does not look very good in the future, and some of the things that are being discussed about cuts and so on, may be a reality simply forced on us by the sizes of population in the NATO countries.

We have succeeded with what we have done. We have been able to deal with, I will not call them surprises but rapid changes, which have come about because we have a very capable competitor in the Soviet Union.

To skew things in one direction we did that with nuclear weapons. We started to change that when we saw it would not hold up. We did that back in 1968.

So, I think we ought to opt for balance. I believe that the conceptual military framework that SAKEUR has worked out with a few additions to deal with the more recent problems in tactical ballistic areas, the armor anti-armor area is a good road map to get us where we want to go, and has the balance to deal with surprises. And, we will have surprises. You may not call them that, but they will be that.

Senator LEVIN. We will come back to that. My time is up, so I will call on Senator Wirth.

Senator WIRTH. Thank you, Mr. Chairman. Gentlemen, thank you for a fascinating discussion. It is good to see that you all agree as much as we do on the committee here.

Dr. Braddock, let me ask you to get into this a little bit more. You, in your discussion were talking about what happened when we were able to put more emphasis on anti-type missiles allowing us, as you said, to thicken our defenses and therefore embark upon greater mobility for our tanks and that the Soviets had then responded as I remember you saying, by vast production of artillery and concentrations of fire power and new tactics, which therefore you said, would lead to a necessary response from us.

Dr. BRADDOCK. That is right.

Senator WIRTH. I am not sure that I got to the point of what that necessary response was. I heard one suggestion made which was hyper-velocity missiles coming out of the SDI program. Maybe I missed that along the way or maybe you wanted to give us some more specifics as to what our response ought to be.

Dr. BRADDOCK. Let me try to do that. I gave that as an example, not as the comprehensive solution. The armor anti-armor problem really has to go with the least expensive portions of the military systems that you buy, the warheads. Conventional warheads are relatively cheap. Relatively, everything is relative in this business.

We have not kept pace with developments in that area because it is a narrow sector. Developments can be hidden for a while in that area. It is easy to do something inside the volume of something about 1 foot by 6 inches around, and you may never discover what is inside that warhead or in a slab of armor that is maybe only a foot thick.

It is an area where you can be "surprised." What we need to do is to have an intellectually competitive effort. We have to broaden the intellectual competition in this area. That is what the group that studied this set of problems concluded.

It is not that we do not have the technology. We actually do. It is sort of salted away in little penny packets here, there and everywhere. Universities overseas, companies here in the United States, laboratories here in the United States, that services run. The problem is not just anti-armor guided missiles, it applies to the penetrators that are fired by our main tank guns, it applies to some of the top attack armor weapons which we are starting to develop.

It is an area where there is measure and countermeasure. What we need is a program that addresses it comprehensively. Because it is an area where you produce a lot of things that are not awfully expensive individually, it does not have the glamour, if you will, that goes with the nuclear weapon or the big platform.

Senator WIRTH. What you are suggesting, and let me see if I understand this. When you say we need an "intellectually competitive effort", the suggestion is that we do not have such an effort. I gather that you are saying to us is to attempt to think this through and require that such an effort be launched; is that right?

Dr. BRADDOCK. I think that requiring it would be helpful.

Senator WIRTH. Why do we not have such an intellectually competitive effort?

Dr. **BRADDOCK**. I think it is historical. These things started off as developments in World War II, and here in the United States, Great Britain, Soviet Union and in Germany, developments took place that gave us the communities needed to produce the weapons we needed to win World War II.

We did not see much innovation come over the years. We have been using shape-charged weapons for 50 years. It has only been in the last 3 to 5 years that there has been substantial innovation in that area.

Senator **WIRTH**. Because this is new, nothing changes very rapidly in the defense structure, that is one reason. The second reason you are citing is that this is a relatively small area and not very appealing perhaps, to technologists given the potential of launching very large new systems and these are the reasons that this has not happened.

If you were sitting where Senator Levin is sitting or Senator Nunn or us, what would you do to ensure that there is an intellectually competitive effort going on in this area?

You have talked about this very eloquently before this committee before, the Science Board addressed it under your auspices, General Starry has been a very eloquent advocate of such an effort. There are a variety of people talking about it.

I gather from what you are saying, it is not happening?

Dr. **BRADDOCK**. That is right.

Senator **WIRTH**. Is that correct, and if so, what should we do to get it to happen?

Dr. **BRADDOCK**. I think you ought to require, and it is principally of the Army that you have to do it, although the Marine Corps and the Air Force and the Navy have contributions to make because they have anti-armor systems.

I think it is principally the Army. I think you ought to ask the Army, not for master plans which is what you have required of them in the past, and you have master plans for armor, anti-armor and what not. You really ought to ask them for what the program is that they are going to undertake and how they are going to make sure that they are going to give enough emphasis to it.

And then, that it will have diversity in it and competition within it, so that we can produce competitive lethality mechanisms and protection mechanisms to put out on the battlefield.

Senator **WIRTH**. Mr. Sullivan, let me ask you if one, you have any comment on this and second, if you might pick up on the question that I think you were asking us to ask you, which was on the increase of firepower and going along with a reduction of troops. You said that you did not want to get into that, but you might want to get into that in terms of questions.

That is a double question, one to comment on what Dr. Braddock had to say and second, to expand upon what you were talking about in terms of increased firepower.

Mr. **SULLIVAN**. Just after Joe did his study on armor/anti-armor, I did one on the management of munitions development and procurement. So, I want to comment on what Joe said because what has happened here is that some of these munitions programs have gotten so small they are below threshold. There is no center of interest in killing tanks.

Senator WIRTH. What do you mean by the program has become so small it is below threshold. It does not appear as a line item in the budget?

Mr. SULLIVAN. It is a line item, but it is a line item for 800K a year and one of your staffers reduces it to 600K a year. Nobody is interested in working on it. If you really are interested in killing tanks, then you need a center for the research and development of mechanisms to kill tanks.

Senator WIRTH. Do you agree with Dr. Braddock?

Mr. SULLIVAN. I agree with him 1,000 percent. We have had these things in the area of anti-ballistic missiles, in ballistic reentry, but we have not had it in the conventional areas of killing tanks, or killing submarines or killing airplanes.

Senator WIRTH. I am new to this. Let us leave——

Mr. SULLIVAN. It is a very interesting subject. It is the management approach, more than the specifics of the program.

Senator WIRTH. I understand. I want to hear concentration of firepower.

Mr. SULLIVAN. Firepower versus manpower is very much related to the activity levels and the maneuverability of a unit. I know this is not something that the committee tends to get into, but if you were to just look at an artillery battalion for instance, it has almost 600 people in it. It has about 18 weapons, and it has about 130 vehicles in it.

Most of the maintenance and annual costs of that unit have absolutely nothing to do with the shooting of 18 artillery pieces. So let me take this to another extreme, it will be like my toll booth extreme so do not take it too seriously.

The cost of 18 pill boxes with guns of the same caliber as those 18 self-propelled machines, but manned by German reserves, costs about one-third as much to build and one-tenth as much to operate each year. So, over 10 years with my mirrors, I can get a 7 to 1 advantage if I build pill boxes instead of maneuvering self-propelled artillery units. This would be clearly unacceptable after the first few days of blunting the initial attack but it should be clearly acceptable when you are trying to disrupt and sap the initial momentum of that attack before it gets loose in West Germany.

The more reasonable alternative to this is one that Glen Otis is so fond of, Senator. I am sure he told you this, Senator Levin. He would like a lot more MRLS, multiple launch rocket systems, and that is because they can fire about 20 times as fast as artillery pieces.

So, I can now get a leverage of a factor of another 20 to 1 by giving my pill box a weapon that fires faster. I know this sounds as though I am doing it with mirrors. You know, 20 times 7 is a 140 to 1 variation in the firepower per man on duty.

You can also switch it from an American man on duty to a German reservist spending a weekend underground. There is such an enormous potential to replace costly manpower with uncostly things that can be fired—the MLRS type or somewhat longer range—that it has enormous potential. It is even more important than that because it can be totally designed, manufactured, installed and maintained by Europeans for Europeans. It does not have to be an American SDI, CDI, Stealth effort which is going to drive us to bankruptcy.

Senator **Wirth**. You lead a defense science board effort on this particular issue?

Mr. **Sullivan**. No. On the issue of the management of the procurement of munitions in general, because it is one of the areas that Senator Levin should add to his list that fell by the wayside when we decided to depend on nuclear weapons.

We not only lack the sustainability either in spares or in ammunition to keep from going nuclear, we have given up the technology base in the main that would allow us to really develop better munitions.

Now, some classified work is going on, I believe, in these areas but I doubt it is anywhere near as robust as would be justified if in fact we are panic-stricken by a conventional imbalance with the Soviets.

Where is the technology base to rectify that imbalance? We are talking about anti-tactical missiles, we are talking about Stealth airplanes, and we are talking about a whole set of vastly expensive things that do not come close to touching the imbalance that we claim is there.

I have to go a little further. I do not believe that imbalance is real. Twenty thousand of those Soviet tanks could not anymore make it to the front than the man in the moon. And, I would like to suggest that rather than negotiate to get rid of them, I think we could get the Japanese to buy them. [Laughter.]

Mr. **Sullivan**. And, at about $100 a ton, we should raise the levels of Japanese automobiles that we let into this country if they have been made out of Soviet tanks. I am not trying to be flippant.

Senator **Levin**. I am not so sure that we want to raise the level of Japanese imports. [Laughter.]

Mr. **Sullivan**. I am not trying to be——

Senator **Levin**. I think that Michigan has raised those levels far enough.

Mr. **Sullivan**. I am not trying to be flippant, but there is an enormous inter-relation between what goes on in our civil economy and our western military potential. I think to try and defeat the Soviets just with our military potential is never going to work.

We are going to have to defeat them or preferably change their minds with our civil economy as well. I would suggest to you that there are thousands of opportunities to do that, and that is one reason why I am so strident about the need for a stronger industrial mobilization capability.

Senator **Wirth**. General Donnelly, let me ask you in the time that I do not have remaining, we have heard testimony in the last few months about the desirability of the Army developing its own close air support capability.

We heard that again this morning in response to a question that I asked to Mr. Perry. Perhaps you could give us your perspective on whether or not that is a desirable direction or a desirable option for us to explore?

General **Donnelly**. Senator Wirth, thank you for the ability to comment. First of all, I have to start it by saying that neither the Army nor the Air Force wants that to happen. We are very satisfied currently with the conditions that exist with the Air Force having the fixed wing close air support mission and the United States having the rotary wing close air support mission. That is what the rotary wing helicopter really does.

They have the gun ships, they have the Tow carriers, they have the other aircraft that do provide close air support for a particular unit in contact. Close air support in the classic sense—now this is Chuck Donnelly talking—as we found it in Korea—and by the way, that is the first time we ever used it effectively because it is the only time we ever had good radios for it.

When you have a very static line and you can now be assured you know where the line is and thus be able to put in firepower within a few hundred meters of the forward line of troops, that is classic close air support as most people think.

There is no such thing in the modern battlefield as a straight line. There is not going to be a straight FEBA there was not even one at Yorktown. We have a tendency to think in straight lines.

If an F-16 is dropping on a target that is going to bother a battalion commander within say 30 minutes, is that close air support or air interdiction? Frankly, I do not care, as long as we are doing our job to maintain or keep the pressure from the troops that are in contact.

Whether we can actually get a specific tank that is now going against a particular platoon or squad, I do not think we can. Nor do I think that the Army can do that. The fact of the matter is, I think we have to look at the close air support in the total matter.

General Otis tells me, as his companion air commander, that my primary job for him had to be to get the artillery, the enemy artillery because they can out shoot us as far as their range versus our range.

I would have to say, is that close air support when I take out the artillery that is banging our troops? I would have to say, in the classic sense, no. In the true sense yes.

I am sorry I went a little bit long into this, but I am so emotional about trying to categorize a particular mission with a particular type system. A system should be able to do other things other than one little tiny job. We can no longer afford, I do not believe, a system that can only do one small job.

Also, the job of close air support is not necessarily to kill things as much it is to kill people. There is not one tank or artillery piece or any APA that can move in this world without a human in it. It takes humans also, to reload the tank, to bring the supplies up, to refuel and so forth.

We sometimes forget that the primary purpose of war is not to kill things, it is to kill people. Unfortunately, we are reluctant to talk about that but, as we all know, people do die in war and that is the basic reason for war.

Senator **Wirth**. Thank you, General Donnelly.

Senator **Levin**. Thank you, Senator Wirth.

Mr. Sullivan, you I believe chaired a Science Board Study on NATO Air Field Vulnerability; is that correct?

Mr. **Sullivan**. Yes, sir, I did.

Senator LEVIN. How would you characterize that vulnerability today and then General, I want to ask you the same question, how we might overcome that?

Mr. SULLIVAN. I have to be very careful when I refer back to Defense Science Board studies. There is no obligation on the part of the Defense Department to tell me what they did about them. I am an outsider, I am not an IG, and what I find is that I get more done if I do not try to find out whether I had anything to do with it.

I am told that airfields in Europe are somewhat better hardened and defended than they were 4 years ago when I did this study. I believe in my heart that the marginal improvement is small compared to the extreme vulnerability of our assets there, and our determination to reinforce early makes that situation worse before the war begins.

The main reason that my study was bottled up was because I made the cowardly recommendation that we should have no assets on our airfields that were not sheltered for the opening round of the war.

Again, it was that same thesis that has led me to believe that you can do the same thing with ground forces. You do not want to use up your counterattack forces prematurely.

So, to the extent that we continue to have air in Europe and air forward in Europe so that it is within range of the enemy indirect fire systems that will precede his first attack, somebody has got to harden them—and all aspects of them—so that they will survive. That hardening includes chemical hardening as well as just hardening against mortars, artillery and the same kind of rockets that I would recommend.

I believe, and again I am not going to make myself very popular, that the air missions that we continue to try and do in Europe are getting to be less and less well done by manned airplanes, at least early in the war. At the outset, the problem is too many targets and not too few targets. You do not need the man as much in the loop as you do later in the war when it has become a tougher problem to find your enemy—whether it is the people or the equipment.

So I would argue that the initial defenses, air defenses, are done better by Patriot or Hawk, and I would stick them in the ground. The best close support for our troops will be provided not by airplanes at all, but by indirect fire weapons fired under the command and direct control of our troops.

There is no reason for a man to fly in an airplane to deliver tonnage within a few miles of our troops, because it can be done by indirect fire weapons which are cheaper and more survivable.

So, I see a confusion between the people that have had classic missions trying to continue to do them in a war for which they are not initially well suited. I become a very strong supporter for close air support, armed helicopters, mobile tanks, and mobile artillery in about the second or third week of the war. I find them a drag on the whole operation during the first week or two. If we choose to lose them during the first week, we must have done the stupidest thing known to man.

Senator Levin. Thank you. General, do you want to comment on the airfield vulnerability issue?

General DONNELLY. Yes, that is all I will comment on, Mr. Chairman. I somewhat disagree with the final comments.

Yes, I think when the Defense Science Board was done a number of years ago there was more vulnerability than there is today. As a result of that study and some other NATO studies, NATO got very serious about hardening the airfields and in fact, had done that.

All of our main operating bases, the U.S. main operating bases, we have 100 percent sheltered. Shelters are available for 100 percent of our aircraft. The NATO standard is 70 percent. In other words, 70 percent of the aircraft will be sheltered.

We are just about there in the main operating bases, and our colocated operating bases which the concept is only about 10 years old. The NATO has now agreed to fund minimum essential facilities for all COBs within Europe. The last funding will occur in 1989, which in fact, will give us minimum essential facilities at all the COBs before they get their shelters. That is disbursed parking, 7 days fuel and 7 days ammunition.

We think that is a good interim measure until the fields can be totally hardened, which is in the NATO program to do so. That extends into the late 1990s. As you might imagine, shelters do not go up that quickly. It takes a while to get them built and then the associated infrastructure and so forth built as well.

We also did a very interesting demonstration 2 years ago called Salty Demo. It was done by our systems command to in fact, blow up an airfield for a number of days, which we did. We did it in Spangdalhan, Germany. A most interesting exercise we learned an enormous amount about was that of airfield survivability.

I think that was probably the best thing that came out of all the studies. It has, in fact, encouraged us not to go out and try to do something to show if yes we are vulnerable. Any piece of ground is vulnerable. But what we could do to reduce the vulnerability through passive defense and other issues and other things that we could do to make the airfield less vulnerable.

I think that will probably give us a shaper rise in first of all, understanding what we need to do as well as putting a little bit more priority on airfield survivability.

Senator LEVIN. When you were the commader of our Air Force in Europe, would you have welcomed that capability to operate fighter bombers away from fixed air bases?

General DONNELLY. If I could have had the supplies and the fuel and the infrastructure necessary, yes.

Senator LEVIN. Is there any effort being made to think that out?

General DONNELLY. Yes. That is our colocated operating base concept (COB).

Senator LEVIN. How close is it to being part of a program?

General DONNELLY. It is a program.

Senator LEVIN. Is it?

General DONNELLY. Yes, sir.

Senator LEVIN. How far along are we in the program?

General DONNELLY. NATO has funded the minimum essential facilities for all COBs as of 1989. That is the last year of funding. They are funding them now.

Senator LEVIN. You are still using a fixed based. You are not disbursing like the AV-8B or the Harrier.

General DONNELLY. No, we are not using that type of vertical or STOL type of aircraft.

Senator LEVIN. What would be your view of that?

General DONNELLY. The problem with AV-8B frankly, and that is the only STOL airplane we have, is that it does not have the range. In other words, it is ideal for the marines to use to provide artillery support which they cannot carry on board their amphibious ships to their troops on the beach.

It is also okay for the British to use it as a close air support type aircraft for the British Armed Forces. But if you have air targets further than whatever the range might be, and by the way it varies by model, so I will not put a range arc out, then the AV-8 cannot handle it.

Senator LEVIN. I take it that it could do the close air support function but not the deep interdiction function; is that a general——

General DONNELLY. I would say that it could do the close air support but not the interdiction. I would not even want to put the word "deep" in. Again, the AV-8B has more range than previous Harriers, but frankly, I am unfamiliar with the range of the new Harrier.

Senator LEVIN. Generally, it could do the close air support function for instance in Germany both East and West Germany, but not the interdiction deep or otherwise?

General DONNELLY. Yes, sir.

Senator LEVIN. Is that a fair statement?

General DONNELLY. It is a very expensive aircraft to maintain. And having seen the British in the field with it, it takes an enormous amount of support to maintain that aircraft in the field.

Senator LEVIN. But it would allow us to get away from the fixed air bases. It reduces vulnerability in that sense; is that correct?

General DONNELLY. Reduce vulnerability only if the enemy intelligence is so bad that they cannot find you. If you are going to operate in a small village from the local warehouse which is, perhaps, some of the plans, and use a local street as a runway, how long does it take for enemy intelligence to find that out, that you are in fact there? And then, you come under the same threat as an airbase at that moment.

Senator LEVIN. Have you talked to the British about that?

General DONNELLY. Yes, sir. And they plan to move a lot.

Senator LEVIN. Dr. Braddock, let me go back into a subject that you and Senator Wirth were talking about.

A few years ago you indicated that the technologies exist to do something about the deficiencies in the armor/anti-armor area, but that nothing then was happening. Tell us again, why nothing has happened in the last few years since you made that assessment?

You went back, I think perhaps 20 years and gave us some historical reasons, but why has not anything happened in the last few years since your analysis was completed?

Dr. BRADDOCK. The development, the research and development activities to possibly come up with cures has started. Both the Army and the Marine Corps and the Defense Advance Research

Project Agency and even the Defense Nuclear Agency, have joint programs to explore solutions. Some of those are things like electromagnetic launchers, which originally started with SDI.

Others are things like tandem shaped charge warheads, which have been speculated about for a while. There is not a program to really see which of these things are the most promising in a short period of time. Find the winners, dump the losers, and get on with the program to field capability.

Now let me make sure that I do not leave you with a misimpression. In this business of armor and anti-armor competition, you cannot come up with a single solution. You cannot, for example, just put all your money or effort into a shape charge warhead, because then the opposition can tune his armor to defeat those things.

So, you have to have both kinetic energy penetrators, high speed rods and shape charged warheads. So, you must pursue both of those. At the same time, you have to look at the implications on operations, because some of these newer concepts have at least opened up the opportunity for innovation operationally. Expanding battle space, as an example.

Senator LEVIN. Why have we not done this? You have identified that for a few years. Why has not that program taken place?

Dr. BRADDOCK. I can give you a personal view. That is all I can give you. The Secretary of Defense asked for a quarterly review and he did get a couple of reviews. As far as I can tell, there has not been a quarterly review in the last 6 to 9 months.

The second thing is that part of that program——

Senator LEVIN. The why? Why is there not an impetus? We have identified this as a major challenge to us. What is lacking? Is it money, willpower, agreement, what is it?

Dr. BRADDOCK. I believe it is a mix of things. For example, just as an example, there was about $230 million in the armor enhancement initiatives program, which is the Army program to improve the penetrators. That was seriously cut on two occasions, last year and this year.

Senator LEVIN. By Congress?

Dr. BRADDOCK. Yes, by Congress. I am not putting all the blame over here, I am just saying that happened over here.

Senator LEVIN. That is exactly what we want you to do is identify what has been the impediments.

Dr. BRADDOCK. The Darpa Program never reached the financial goals for much the same reason. They did not get quite all the money they expected. The joint programs thus far, have succeeded. These multiagency programs, where the Army, DMA, Darpa got together, that succeeded pretty well.

That appears to be on track and it looks very promising, I might add. I think the difficulty is that too many people are in charge of the program. If you want to look at a management program, and that is what I think it is, I believe what has to be done is take an individual, senior enough to command the resources and so on probably in the Army, and charge that individual with solving this problem in 2, 3 or 4 years and coming up with the fielded solutions.

I think that is what you need. Too many people are responsible for the pieces. There is not enough mass, if you will, put together that way.

Senator LEVIN. Thank you. Senator Wirth.

Senator WIRTH. It sounds to me, Dr. Braddock that we have a classic here of an issue kind of dropping between a variety of stools. On the one hand, it does not appear to me as if the Congress understood the importance of this from what you are suggesting in terms of the funding. Second, I would guess that the Army probably felt threatened by this. It was kind of a threat to their stewardship of armor and we know how to do it and somebody else does not. I mean, that is a normal, that tends to be a normal, bureaucratic reaction.

Third, from what you were suggesting earlier, there was not enough money or impetus on the outside to perhaps create a critical mass of players on the outside who would put the pressure on to get something to happen.

Dr. BRADDOCK. You have it.

Senator WIRTH. So I would guess that given that, what we have a responsibility then to do is to kind of put this up in the lights somehow. It seems to me that maybe what we ought to be doing, Mr. Chairman, is to focus a hearing directly on this or figure out some other way to elevate this up the ladder.

I have been now hearing about this for 3 or 4 months. It comes into play as we have these very important discussions on conventional arms control. We cannot, in fact be serious about arms control, if we have a very severe set of problems related to armor. And our relationship with the Soviets is really going to be skewed by some advantages that they may have in the area of armor or their ability, according to your testimony, to counter what we had done earlier.

It seems to me that there is a certain urgency that has come out of this that we ought to be lifting this up; is that?

Dr. BRADDOCK. Just right.

Senator WIRTH. Let me ask you, if I might, a question related to a statement made by the General Gerazelski, who said early in November that he believed that the Warsaw Pact was ready to reduce very significantly their commitment to armor, the number of tanks that they had, that they were ready to make that kind of reduction if in fact NATO was prepared to reduce significantly its number of bombers.

That raises two questions. One is, is that real, unreal? What is your opinion of that, any of you might have a reaction to that.

And second, what does that say if he being a spokesman of some kind, I suppose, is willing to have that discussion of armor versus air? What does that say about the fixation that we have had focused on troops? He is not talking about troops; he is talking about armor and air.

There are two threats to that question, and I would appreciate any reactions that any of you might have.

Dr. BRADDOCK. I have two reactions to it. One is that the Soviets may be essentially probing with us; he is not doing it on his own. The second reaction I have to it is that it is a very interesting way to change the image of an oppressive dictator, in effect, from maintaining the prison that Poland now is, at least as far as any intellectual ferment about freedom is concerned, and changing him to a possible arms reduction advocate and maybe Noble Prize winner.

It is an interesting way to deal with the Polish problem on one hand, and maybe probe for some leverage, bargaining or whatever, that the Soviets might be after. I would be very suspicious of that whole thing.

Senator **Wirth**. You are suggesting that Gerazelski is going after a Nobel Prize?

Dr. **Braddock**. Right, so he can change his image and continue—— [Laughter.]

Senator **Levin**. I think it would take more than one announcement.

Dr. **Braddock**. I could come back to that in a minute, but let me pass the microphone.

Senator **Wirth**. Sending Soviet tanks to Japan and Gerazelski getting the Nobel Prize—let us bring this to a quick conclusion.

General **Donnelly**. I am just sorry that I do not have a similar recommendation like steel to Japan and the Nobel for the General. I really agree with Dr. Braddock, that he is posturing at this point. I do not really think that he is a spokesman for the Soviet Union.

Senator **Levin**. You do not think?

General **Donnelly**. No, not in this case.

Senator **Levin**. Dr. Braddock's point was that he did not think it was independently made.

General **Donnelly**. I do not think that he was—he may have heard it and he may believe it. But this is just Chuck Donnelly's thinking that I do not think in something this important that the Gorbachev group would depend upon him on the chief of Poland to make the comment.

Mr. **Sullivan**. I guess I get to take a turn at this one too. If I may, in this thing that I have been doing with the Atlantic Council—seemingly endlessly for the last couple of years—we conclude that in the West it is time to seriously review the relationship between the United States and its protectorites if not satellites, in Europe. You can use a less pejorative term if you choose. The burden sharing arrangements are not right.

The thing that now becomes evident to me is that the Soviets have got the same problem with their satellites or protectorites, or whatever. Over the period of the next few years, they have got to do something to loosen the corset strings on these countries that are all doing economically better than the Soviet Union and have a variety of other interests.

This is a long way around for me to say that it would not surprise me if Gorbachev chose to use a representative of another country to put forward some of these trial balloons. He was not home when he raised the whole issue of the Atlantic to the Urals. I cannot remember where he was, but it was in an East European capitol and not his own. [Budapest.]

So, I do believe that we would be remiss if we did not look for some changing relationships with the Soviets and their satellites at the same time we are reviewing what we should do with our allies.

If I may, on this tank versus airplane thing, it is my feeling that the Soviets are psychotic about Western air, just as we are psychotic about those rusty tanks that I do not think could make it across Poland in an ambulance.

We choose our own boogie men and then create something very big around that, and I do not believe that we can afford not to pay attention to this small cry that in fact they are worried about our tactical aircraft. They are worried about our tac air for one reason. Not because it can do close support, but because it can carry nuclear weapons to the Soviet Union.

We cannot afford not to realize that that is their main concern. It is not in the INF negotiations. The greatest remaining threat of nuclear destruction to the homeland now comes from the Western air. I think we should hear that cry and choose what to do about it, but we should not pretend that it was an attempt to get a prize.

Senator WIRTH. I tend to agree with that. I think that the world is changing so rapidly that it is incumbent upon us to look at all of these and not dismiss them out of a cold war fix that might have existed 10 years ago or 20 years ago.

Mr. SULLIVAN. It is going to move faster than your hearings.

Senator WIRTH. But rather to say, maybe there are options and maybe there are approaches here that are very serious.

Mr. SULLIVAN. Yes, sir.

Senator WIRTH. And at the same time, recognizing that we are not dealing any longer with a kind of monolithic Warsaw Pact. We just saw the statements yesterday coming out of Czechoslovakia, very critical of Gorbachev and liberalization if that exists, in the Soviet Union. That is certainly very significant from what one gets in terms of discussions coming out of Hungary right now, for example. They are very different.

There may well be a lot of opportunities here, and one of the things that we have to do it seems to me looking at this area of conventional arms control, is to understand that probably another way of cutting this is not just United States, U.S.S.R., but looking at what the impact is going to be on our alliance and what the impact is going to be on their alliance and how those players play. I think that the reason I asked the question——

Mr. SULLIVAN. Let the record show that I nodded.

Senator WIRTH [continuing]. Is to try to get a different cut at it.

Mr. SULLIVAN. Let me say sir, that I think those opportunities are fragile. If they are abused badly enough they will disappear.

Senator WIRTH. Mr. Chairman, thank you very much.

Senator LEVIN. I just have a couple of additional questions. Dr. Braddock, in the assessment of the armor/anti-armor capability, did the Defense Science Board look at crew quality and the level of training for crews; was that a factor in the study?

Dr. BRADDOCK. No, we did not. It is a factor but we did not explicitly look at it.

Senator LEVIN. This is something that has troubled me in a broad range of areas. We tend to do the bean counting, we look at tanks versus tanks for reasons that Senator Glenn gave earlier this morning, I do not think it is really the way to do it. The other reason to do it is, we very rarely factor in the qualitative aspects of the balance.

Was that just that you just cannot quantify it, you cannot make a judgment on it, or why is it that that should not be factored into that kind of a study?

Dr. BRADDOCK. I am not trying to duck it, but it really was not in our charter to look at it. We looked at the technical competition.

I might add that that is a worthwhile area to look at. And certainly how troops are trained not only for that mission but all the others, and I think what you will find is that it has a great impact. Let me take you back in history to the Korean war.

We had some well trained troops in Task Force Casey, whose anti-tank rockets, the bazookas of that day bounced off the hulls of the T-34. Training can do a lot if you do not have a true technical shortfall. And what we are seeing is in the armor/anti-armor business is some true technical shortfalls.

I do not believe that there is a way to cure the problems that we have with training.

Senator LEVIN. Are you familiar with the plans of the Army for the armored family of vehicles?

Dr. BRADDOCK. Yes, I am.

Senator LEVIN. Could you give us your opinion as to how high a priority we should give to that program in light of your view of the deficiencies?

Dr. BRADDOCK. If we are going to develop a substantially follow on to the M-1 and M-2, if that is the requirement, and that is hazy as to whether we should or not. There are arguments for and arguments against, it depends on how well you can improve the current vehicle.

If you cannot get enough capability out of those, you are going to have to go to a new generation of vehicles. When you do that, the family of vehicles concept has a number of efficiencies that should be looked at seriously.

I think the judgment ought to be made based upon the weaponry we can put on the M-1 and M-2, and the protection that we can put on. That goes right to the heart of this armor/anti-armor issue. We clear up that problem, my guess is that we can keep the M-1 and M-2 in the field for a while.

Senator LEVIN. Just one more question, general, for you, on the relative strength of tac air between us and the Warsaw Pact. Would you trade NATO's tack air for the Warsaw Pact tac air?

General DONNELLY. No, sir.

Senator LEVIN. Why is that?

General DONNELLY. First of all, our equipment is basically better and we are far better trained. Really, I think, we have better weapons even though there are some deficiencies which many of us would like to see cleared up.

The fact of the matter is, with better airplanes, better crews, better maintenance, all of the things that make airplanes go and thus to drop bombs and other things, we are much better. I really zero in on training.

Senators LEVIN. That is despite some of the numbers?

General DONNELLY. Yes, sir. As commander there, I look at the numbers that could hit me. Yes, you can put a lot of numbers. Many of them we know would be reserved for home defense, East German as well as Czechoslovakian aircraft. They are designed strictly for air defense as fighters. Yes, we would have to fight our way through there, through those defensive fighters if we went in sufficiently deep.

But I worried also about my air defense as well as my survival, about what they could hit me with. We evaluated that almost on a daily basis as we looked at our plans, our tactics, and many of the other things you have to go through to prepare for a conflict.

Senator LEVIN. Thank you. One last question for Mr. Sullivan. You have noted in your prepared statement that the major NATO allies, Britain, France and Germany, have inadequately equipped their structured reserve forces and fielded very little conventional combat sustainability. I believe you said also in your oral presentation you made reference to that.

Can you be more specific on that? Whose reserves are most inadequately equipped and whose are most poorly structured, and whose got the best and worst sustainability?

Mr. SULLIVAN. I really cannot. I do not normally back away from these things because I do not mind banging people. Amongst the three that you mentioned, I believe the Germans are in the best shape, the French are in the next best shape, and I think the British are in the worst shape.

I think it has to do with their own predilections in their culture. As long as the United Kingdom insists on being a nuclear power of note, it is going to underfund the more crass things like the conventional defense of Europe.

The French are sort of in and out, and I must say that I credit them for doing some good things. I do not think sustainability is one of them.

The Germans are probably the best of the three, because they are closest to the action. I would also argue that I see some very encouraging trends there, that they believe they can perform their defenses more efficiently than they are now. I would agree with that.

But one of the odd things about NATO, and again the nuclear game played in this somehow, the NATO nations have a higher fraction of active units to total units than any other collective group of military forces in the world. Certainly relative to all the neutrals in that part of the world, and in the main, relative to the Warsaw Pact countries.

Somehow we have insisted on a level of day-to-day readiness that has pushed all of our resources into equipping, manning, and operating active forces.

So the Europeans sit there and say we are stupid not to have the draft, and that they have the draft. But they have nothing to send those draftees or reservists to war with. If in fact they had put some more of their units into the reserves and used the money saved to buy them equipment, we could have a very different balance in Europe.

You know, you asked this question at the beginning this morning, sir, and I keep coming back to it. How can we have a bigger population, a bigger GNP, smarter technology, and still see this vast imbalance between ourselves and these developing countries on the other side of the border?

You have to conclude that a lot of it is somehow self-created by our own culture and our own predilections. That is why I believe that we can do so much more with the resources that we have if we decide: (a) that there are not going to be any more resources; and (b), if the Europeans decide they cannot count on us doing it for them.

I think those two ingredients provided the leadership and the motivation to change the conventional balance in Europe in the direction that you think is necessary.

Senator LEVIN. Thank you. Senator Wirth.

Senator WIRTH. No, sir.

Senator LEVIN. Let me just end on a positive note, having to do with the armament enhancement initiative that Dr. Braddock referred to. We did restore that money in this years budget. I will give you the good news, the Senate fully provided for it, the House cut it, and in part we think is because the Army did not make a heck of a good strong case for it there.

In any event, the Congress did restore those funds, so that initiative is in the authorization bill. I think as you pointed out this morning, the real problem is that we do not have anybody at a high level to push and coordinate that program, and to dramatize the need for it.

This subcommittee has some responsibility, and as Senator Wirth has mentioned this morning also, to make that need very clear and to try to make sure that the impediments to it are being resolved in the management structure over at the Pentagon are removed so that we can have the proper management for that program, the coordination and the central direction that it needs.

All of you have been very helpful this morning; challenging and provocative. It has been a wonderful panel and we appreciate your coming. Some of us may have some questions for you, and if you have a chance, we would appreciate your answering for the record.

Again, the thanks of all of us for your appearance this morning.

[Whereupon, at 11:52 a.m., the hearing adjourned.]

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